

The Start of government Science in Australia : A. W. H. Humphrey, His Majesty's Mineralogist in New South Wales, 1803-12

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From 1803 until 1812 A. W. H. Humphrey held the post of mineralogist in the civil establishment of New South Wales. At the time he had no counterpart in the United Kingdom. His appointment marked a development in official British attitudes to science, begun with the Admiralty's acceptance of civilian scientific staff on exploring voyages. Other European nations, notably France, already acknowledged the value of science and the British decision to send Humphrey may have been related to the fact that a French expedition then active in the Australian region included two mineralogists. Whether or not that was the case, Humphrey in Australia — paid even less than the miner who went with Flinders on the *Investigator* voyage — was soon all but forgotten; early colonial records give little about the man or his work. What tends to be remembered is Governor Macquarie's stinging indictment when he accepted Humphrey's resignation in 1812.

The present study is based chiefly on Humphrey's letters, here printed for the first time (Appendix), and other papers in Australian and English archives. They extend knowledge of the London dealing trade with which Humphrey's family was closely connected. To those connections Humphrey owed his appointment. His letters are valuable records of early Australian settlement and reveal an active association with Robert Brown. The papers show the injustice of Macquarie's dismissive view. Humphrey, as H.M. Mineralogist, may not have contributed much to Australian science but, it is suggested, the circumstances of his employment hardly encouraged achievement. Government had established a post without bothering to define adequately either purpose or expectations. At the outset, at least, Humphrey pursued what he saw as duty with intelligence and enterprise.

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INTRODUCTION

From 1803 until 1812 the civil establishment in Australia included an officer whose duty, nominally at least, was science. If government involvement in science nowadays is taken for granted, it was quite otherwise with British administrations at the time A. W. H. Humphrey, Gent., became His Majesty's Mineralogist in the settlements of New South Wales. Even in the United Kingdom, crown patronage of natural science then hardly went beyond the Royal Observatory at Greenwich and the British Museum at Montagu House where, in the Department of Natural and Artificial Products, natural history kept company with antiquities under the care of a keeper (E. W. Gray [1748-1806]) and one assistant (Miller, 1973). In 1803 only the assistant, the naturalist George Shaw [1751-1813], was at all active. The first mineralogist at the museum, C. D. E. Konig [1774-1851], joined in 1807 to assist Shaw, by then himself keeper. Not until 1814 was a mineralogical and geological surveyor attached to the Trigonometrical Survey in the United Kingdom (Close, 1926) and another twenty-one years passed before establishment of a separate Geological Survey (Flett, 1937).

Despite the novelty of Humphrey's appointment, little attention hitherto has been

paid either to the man or his duty. Giblin (1939: 33), an industrious student of early Tasmanian history, gave a typical explanation — the poverty of documentary evidence made it 'impossible even to figure the role of A. W. H. Humphrey, the mineralogist'. In fact, copies of letters from Humphrey to his father, written in the period 1803-4 and preserved among the Hamilton and Greville Papers in the British Library, London, undermine that claim. The London manuscripts, here transcribed and printed for the first time (Appendix), throw light on Humphrey, his activities, his associates — who included the botanist Robert Brown [1773-1858] — and a fascinating period of Australian settlement. They extend the account in Stancombe's (1966) short biographical essay, a useful contribution despite its failure to recognize the significance of Humphrey's origins. In that regard papers now in the Tasmanian Archives, Hobart, yield details important to historians of natural history.

A note in *Historical Records of Australia* (series III, vol. I: 782), a collection hereafter designated *HRA*, queries the date (14 January 1803) given on Humphrey's commission. The note claims the post was not offered until 1 February and accepted only on 18 February 1803. That source further identifies the offer as coming from Charles Greville and, paraphrasing Greville, explains 'that the position required more knowledge than that usually possessed by a working miner, and the duties would consist of making a collection of minerals and earths, and of directing some miners in their search for minerals'. The involvement of the Rt Hon. and Hon. Charles Francis Greville [1749-1809] is not surprising. This strangely-forgotten figure — forgotten that is except for his association with Emma Lyon or Hart, later Lady Hamilton — in his time almost rivalled Sir Joseph Banks [1743-1820] as a patron of science in London. Greville shared certain botanical interests with Banks — both are honoured as founders of the Horticultural Society (Anon., 1942) — but Greville's enthusiasm as a collector was directed particularly towards minerals and there he and Banks parted company. Banks had ignored Governor John Hunter's plea of 1797 that a mineralogist be sent to New South Wales and when, in 1801, Matthew Flinders [1774-1814] sought such a person for the *Investigator* expedition Banks chose a practical miner from his Derbyshire estates as sufficient for the purpose (Vallance and Moore, 1981). In 1803 Greville had the chance to promote his field of interest.

Greville's mineral collection, built-up over more than thirty years, then had no rival in England. Its acquisition by purchase in 1810 for the British Museum raised that institution's holdings of minerals to 'the first rank among the collections of the world' (British Museum, 1904: 345). To create this and his other natural history collections, Greville depended chiefly on dealers but also on correspondents in distant parts. Robert Brown, going to Australia with Flinders, was reminded of Greville's needs (Vallance and Moore, 1981); the genus *Grevillea* (Brown, 1810: 375) is a memento. Greville, like Banks, used his influence to place protégés. One such already in Australia (*Hist. Rec. N.S.W.* III: 652) was the explorer F. L. Barrallier [1773-1853] whose father, a dockyard surveyor and engineer, worked at Milford Haven, south Wales, on the estates managed by Greville (Beazley, 1976 — where Greville is confused with his brother!) for his uncle Sir William Hamilton, the ambassador at Naples and student of Mt Vesuvius. Peter Good, the gardener and Brown's assistant on *Investigator* until his death in Sydney, 12 June 1803 (*Sydney Gazette*, 19 June 1803), likewise owed his position to Greville's influence (Anon., 1942: 230), as well as to the support of W. T. Aiton of Kew (Edwards, 1976: 387).

Greville's patronage of one who was to collect minerals in Australia might seem an expression of self-interest, and an unusual privilege Humphrey received with his appointment to deepen suspicion. In fact, there is no evidence that Greville received anything directly from the mineralogist in Australia; the privilege, as will be shown,

was more likely a response to commercial instinct in the Humphrey family. At any rate, Humphrey held the right to ship home free of charge and for his own disposal one set of all samples he collected. The concession was made known in a despatch (*HRA* (I) IV: 37) to Governor Philip Gidley King [1758-1808] in Sydney announcing the appointment of Humphrey, a man 'in every respect well qualified for the duty'. As to the duty, King received only the vaguest advice. One wonders what, if any, more specific instructions were issued to Humphrey. Had the government itself any clear ideas as to his role? If Humphrey were deemed qualified for a post supposedly requiring some special knowledge, the salary offered (£50 *per annum*) compares miserably with the £105 paid to the miner who went with Flinders. Colonial records, indeed, show that Humphrey received a yearly stipend of £95.5.0. in Australia — the same as that paid in Hobart to the assistant surgeon, the deputy commissary and deputy surveyor — but when it is recalled that Robert Brown's salary as naturalist on *Investigator* and in Australia amounted to £420 *per annum*, the lowly status of H.M. Mineralogist becomes abundantly clear. The government was paying Humphrey not as a scientist but rather as a prospector. In spite of the official confidence, did Humphrey's background really prepare him for either sort of work?

A COLLECTION OF DEALERS

During the 18th century an extensive trade in objects of natural history arose to satisfy wealthy Europeans who through genuine interest or mere fashion wished to have their own collections or cabinets. At least three generations of the Humphrey family were active in that trade. Others, related to them by marriage, combined to give a century's service to one or other branch of natural history dealing. Theirs is a story that deserves to be told separately; here it is intended only to fix the place of Humphrey the mineralogist and to correct seeming errors in recent papers. The main source for this revision is a genealogy prepared by Humphrey's eldest sister and now preserved in the Tasmanian Archives as part of Caveat Board Report 525 (Supreme Court of Tasmania, SC 285/25).

According to the Hobart document, Adolarius William Henry Humphrey was baptized at the Church of St Martin-in-the-Fields, London, on 26 May 1782. One presumes he was born in London earlier that year or late in 1781. That would agree with a note (*HRA* (III) I: 782) indicating Humphrey was 22 years of age when he landed at Hobart in February 1804 and his obituarist's advice (*Hobart Town Courier*, 16 May 1829: 2) that the former mineralogist died aged 47 on 11 May 1829. From the genealogy it appears he predeceased two elder sisters and a younger sister and brother. Their father, George Humphrey, the most prominent of the Humphrey dealers, is known chiefly for his concern with shells. He will be referred to here as George (II), to distinguish him from his father, according to Swainson (1840: 219) also a dealer, and his younger son George (III). Swainson gives a fulsome account of George (II), acknowledging the encouragement Humphrey showed him when a boy. The genus *Humphreyia* (Gray, 1858a) and family *Humphreyiidae* (Gray, 1858b) recall his name. Their author, J. E. Gray [1800-1875], had known Humphrey as an old man and thought him, while 'comparatively an uneducated person', one 'far in advance of the state of natural history of his time' (Gray, 1858b).

George (II) was associated with a number of sales still remembered by their catalogues — his own *Museum Humfredianum* (1779), for instance, as well as the Portland sale (1786) and the *Museum Calonnianum* (1797). Whitehead (1973, 1977), Dance (1962) and Iredale (1987) refer to Humphrey's part in the preparation of one or other of these catalogues. George (II) contributed one paper to the Linnean

Society of London (*Trans.*, 2, 1794: 15-18) and, as Whitehead (1977) shows, was involved with E. M. da Costa [1717-1791] in the unfinished *Conchology, or natural history of shells* (1770-71). Another work printed in London, *Rare subjects in conchology* (2d edition), is attributed to Humphrey by the Library of Congress, Washington D.C., owner of what may be a unique copy. The first edition is unknown but if the date (1790?) assigned to the second is a guide this short account of specimens belonging to the French emigré C. A. de Calonne [1734-1802] shows that Humphrey knew the collection long before he was involved in its sale following Calonne's ruin in the Bourbon cause. An apparently-unpublished *Directions for collecting and preserving all kinds of natural curiosities, particularly insects and shells*, dated London 1776, in the library of the University of Pennsylvania, Philadelphia, is also attributed to George (II) Humphrey.

George (II)'s dealings in minerals are exemplified in the unpublished *Catalogue of Fossils* listing a collection possibly prepared for, and certainly sold to, the Rev. C. M. Cracherode [1730-1799] who bequeathed his mineral cabinet, built on this purchase from Humphrey, to the British Museum. The collection, Humphrey's manuscript catalogue considerably extended by Cracherode's later acquisitions and a transcript of the whole made by E. W. Gray, are now in the Department of Mineralogy at the British Museum (Natural History). Humphrey's work clearly belongs to the period 1786-88, for certain items listed in his hand refer to purchases at the Portland sale and the catalogue bears Cracherode's monogram with the year 1788. The arrangement adopted by Humphrey appears to follow broadly Linnaeus's scheme in the 12th (Stockholm, 1768) edition of *Systema Naturae* but with variations that give the whole a character *sui generis*. Humphrey evidently had a fair working knowledge of minerals.

The Humphrey genealogy in Hobart disagrees with information recently reported by Frondel (1972) and Whitehead (1973) on George (II) and other members of the family. George (II), according to the Hobart document, was baptized 19 August 1739 at St John's, Wapping (London), where his parents had married in 1733 or 1734. George (II), in turn, was married at 'St Anne Westminster' (St Anne's, Soho) on 3 August 1771 and buried there 8 January 1826. His brother William, one of the artists employed on da Costa's *Conchology* (Whitehead, 1977) was baptized at Wapping in 1745 and buried in the Soho churchyard 27 May 1810. Whitehead (1973) refers to William's sponsorship of the caricaturist James Gillray, with whom his unmarried sister, Hannah Humphrey [1750?-1818], had a 'curious relationship'. Whitehead adds that the print-selling business at 27 St James's Street was taken over after Hannah's death by her nephew George (III) who, in 1823, had his own shop three doors away. This George, the youngest child of George (II), seems to have continued his father's business. The genealogy records the baptism of George (III) at 'Christ Church Surrey' 24 May 1789, his marriage at St Marylebone (no other details) and burial in Soho 19 June 1831.

Through George (II)'s elder sister Elizabeth the Humphreys became linked with another family of dealers, known especially for their trade in minerals. Baptized at Wapping 3 April 1735, Elizabeth Humphrey married (Adolarius) Jacob Forster or Förster [1739?-1806] at St Martin-in-the-Fields on 16 August 1768; she was buried in Soho 29 February 1816. Her husband is commemorated in the olivine mineral *forsterite* (Frondel, 1972). A German by birth, Forster had business interests in London, Paris and St Petersburg, and travelled widely both as collector and dealer. The last ten years of his life, in fact, were spent in Russia and there he died, at St Petersburg 26 May 1806. During this period his wife ran the business in London. Frondel (1972) refers to the mineral store in Paris as conducted by a brother (Igham)

Henry Forster, whom Whitehead (1973) suggests was Ingham Forster, a London dealer and friend of E. M. da Costa. Any connection of Ingham Forster, however, with the Paris business must have been slight. Ingham Forster died in 1782 (*Gentleman's Magazine*, 82 (1), 1812: 515) whereas, according to Frondel (1972), Jacob Forster's will, written in 1800 and later, names a brother Henry and a nephew John Henry Heuland [1778?-1856] as legatees. A passage in Schneider (1809: 47-50) identifies the brother as Herr Bergrath Joh. Heinrich Forster who from time to time and for long periods had looked after the Paris business but when Schneider wrote was living in retirement at Breitenbach by the König See in Bavaria.

The nephew mentioned in Jacob Forster's will himself became a London dealer. Like his uncle, Heuland is remembered in the name of a common mineral, the zeolite *heulandite*. Despite this eponymous fame, little is known of the man — apart from his public career as a dealer. At least that is the impression one gets from his only biographer (Russell, 1950). Heuland, in fact, was German, and presumably a son of Forster's sister. Schneider (1809) refers to three brothers from Bayreuth, the youngest of whom — Herr Heinrich Heülandt — had assisted his uncle Jacob Forster with the collection acquired by Tsar Alexander I in 1802. The Bayreuth connection is admitted by Heuland himself in a letter dated 7 September 1807 to the Cornish antiquary and mineralogist Philip Rashleigh [1729-1811]: 'Not being an Englishman, I at this time luckily run no risk to go to Paris Sir. Till last year I was a prussian subject, but through the treaty of Tilsit a bavarian now, as Bayreuth in franconia to which I belong, was given to bavaria' (County Record Office, Truro, Cornwall — DDR 5757/1/101). Schneider's remark that the other brothers were in the service of the King of Spain, collecting minerals in South America for the royal cabinet is broadly confirmed by the Heuland — Rashleigh archive at Truro though by mid-1807 Heuland knew of the death of his brother Conrad in a Peruvian mine. Russell (1950: 405) plainly failed to notice these contemporary documents. Christian Heuland's account of scientific travels with his younger brother Conrad in Chile and Peru during 1795-96 (Heuland, 1929) likewise escaped Russell's attention. From the Heuland letters it also emerges that 'Addy' Humphrey, the mineralogist in Australia, was not only Jacob Forster's nephew by marriage but also a godson remembered with a legacy of £200 in Forster's will (DDR 5757/2/133 — 20 December 1808).

It is not clear when J. H. Heuland took up residence in London. His letters at Truro reveal that he left Jacob Forster at St Petersburg in 1803; early in 1807 he was in London helping Elizabeth Forster and attending to his inheritance. March 1808 saw the first of his long series of London sales (Russell, 1950). Elizabeth Forster by this time had decided to retire from business and so what presumably was her share of her late husband's natural history stock (5860 lots!) went under the hammer in four sales occupying 45 days of the period 2 May-4 July 1808 [Chalmers-Hunt (1976: 71) cites only the first three sales; catalogues of all four are to be found in the Mineralogy Library, British Museum (Natural History)]. Settlement of the Forster estate was plainly no simple, amicable affair and although Heuland seems to have been genuinely attached to his aunt, the letters to Rashleigh contain numerous caustic remarks about her family. George (II) Humphrey is accused of pocketing his son's legacy, supposedly as a way of recouping the expense of fitting-out 'Monsieur Addy' (DDR 5757/2/133), of acting against him at sales, of spying on his business and of turning Greville against him (DDR 5757/2/117 — 30 October 1808). Heuland suggests a character very different from the one praised by Swainson (1840), but then Swainson was not a competitor. As a comment on Greville's supposed coolness, Heuland's own claim that Greville died owing him £1900 for mineral purchases (DDR 5758/4/1) may be noted.

Such was the family of Humphrey the mineralogist. What he did before 1803 is unknown but it is presumed that he assisted in the dealing trade, learning thereby something of the materials of natural history as well as the collectors who patronized the Humphrey and Forster businesses. Among those patrons was C. F. Greville, to whom Humphrey owed his position in Australia. How Humphrey's background qualified him for pioneering work in the field (cf. *HRA* (I) IV: 37) remains obscure. How he responded to his ill-defined duty will now be considered.

H.M. MINERALOGIST IN AUSTRALIA

For reasons political, commercial and penal (see *HRA* (III) I: 1-3), the British government late in 1802 resolved to establish a settlement in the vicinity of Bass Strait, then still within the territory of New South Wales. David Collins [1756-1810], at home on half-pay since his return from Sydney in 1797, was to be lieutenant-governor of the outpost. His commission bears the same date as Humphrey's and to his staff the mineralogist was assigned. The haste with which appointments and other preparations for the voyage were made may well have expressed British uncertainty about French intentions regarding Australia. Nicolas Baudin [1754-1803] and his expedition had spent much time in the region of Bass Strait and Tasmania and were still occupied in Australian waters. Did the fact that Baudin was known to have two mineralogists (Vallance, 1975: 23) with him prompt the British to send Humphrey? If so, it was a poor answer, for the Frenchmen had both received tertiary training in mineralogy. Certainly, representations were made in London that the French scientific initiative should be matched. For instance, among the Pelham Papers in the British Library (Add. MS 33124, ff109-116) is a memorandum by the traveller, collector and dealer John Mawe [1764-1829] proposing a mineralogical expedition to New South Wales. The document is undated but reference to French preparations suggests the year 1800. Mawe's remark that 'it will be truly Mortifying to see the French publish the Geology of our settlements' perhaps was kept in mind by Lord Pelham, in 1802 a principal secretary of state in the British cabinet. But if Humphrey, despite his lowly status and reward, is to be seen as Britain's representative in science, at least one lesson had been learned — science and war ought not mix. Unlike all commissions hitherto issued to government officers in Australia, those of Humphrey (*HRA* (III) I: 6) and the chaplain Robert Knopwood [1763-1838] specifically excluded reference to the 'Rules and Discipline of War'.

Of the two ships detailed to take Collins and his contingent to Australia, H.M.S. *Calcutta* had been expected to leave in October 1802 with convicts for Port Jackson. Instead, it remained in port pending a decision on the new settlement. Once that was made and the convicts diverted to Collins's care a privately-owned vessel the *Ocean* had to be chartered to carry the necessary stores. The grossly-overcrowded condition of the *Ocean*, to which Humphrey was assigned, drew protest from Collins on 21 March 1803 (*Hist. Rec. N.S.W.* V: 74) but what, if anything, followed to alleviate the problem is unknown. Just over a month later the ships sailed in convoy from the Isle of Wight.

Accounts of the voyage to Port Phillip by several travellers on the *Calcutta* are known. J. K. Tuckey [1776-1816] published his soon after returning home with the ship (Tuckey, 1805). Parts of Knopwood's diary have long been in print; all the surviving text is now available (Nicholls, 1977). Pateshall (1980) is a recent addition to the literature. As the two ships parted company during a storm in the South Atlantic leaving the *Ocean* to make straight for Port Phillip, Humphrey has a somewhat different story to tell. Though a 'dull sailer', according to Collins, the

Ocean managed to reach her destination two days ahead of *Calcutta*. Unpublished letters and the journal (British Library, Add. MS 45156) of a colleague on the *Ocean*, G. P. Harris [1775-1810], deputy surveyor, supplement Humphrey's narrative. The Harris Papers have still to repay careful attention; Harris and Humphrey plainly shared many interests in natural history. A few remarks on the voyage and more about the settlement made at its end can be found in a letter by the missionary W. P. Crook [1775-1846], another passenger on the *Ocean* (*Hist. Rec. N.S.W.* V: 254-257).

Sullivan Bay (near the present Sorrento — see Appendix, note 15), where convicts and stores were landed and a camp set up, was plainly unsuitable for a permanent settlement; it lacked even an adequate supply of fresh water. Collins could not know that Port Phillip had been charted, by Charles Grimes [1772-1858] from Sydney, only a few months earlier (*Hist. Rec. N.S.W.* V: 263) and had to order his own reconnaissance led by surveyor Harris. Lt Tuckey of the *Calcutta* joined the work. Humphrey appears rather self-righteous in his letters explaining why he did not assist. Then, as later, Collins showed a reluctance to command Humphrey's services, leaving him to volunteer as he chose (cf. *HRA* (III) I: 322). Humphrey's failure to come forward at Port Phillip gave Harris and Tuckey opportunity to report geological matters — and each was a reasonably well-informed observer. The Harris Papers in London and the report printed at *HRA* (III) I: 31-32 show what Harris could do. Tuckey's report (*HRA* (III) I: 110-122) and book (Tuckey, 1805: 158-160, 165) are quite as rewarding. Tuckey, by the way, has another claim to remembrance by geologists. During his ill-fated expedition to the River Zaire (Congo) in Africa, Tuckey took much trouble to collect rocks. Konig's work on the samples, printed as an appendix to Tuckey (1818), is the first published study of a rock collection made by a British explorer.

Humphrey seems to have contented himself at Port Phillip with walks in the 'woods' and work about the camp which, incidentally, was recorded by Harris in map and topographic sketch (British Library, Add. MS 45156, ff12, 13), with the tents of surveyor and mineralogist indicated. If Humphrey's letters repeat what Harris and Tuckey saw, there is evidence in them also of subtle observation. His account of signs of 'Encroachments of the Sea' in the Point Nepean area must be among the earliest discussions of marine erosion in Australia. Of interest likewise is the suggestion, based on observation of the coasts adjacent to Bass Strait and its islands, that 'at some former Period, Van Diemen's Land [Tasmania] was connected with, and formed part of New Holland [Australia]'. The thought seems original; there is no hint of it in the only published source (Flinders, 1801) he might have read though, of course, geographers not long before had assumed the link still existed.

The arrival of the schooner *Francis* from Sydney in mid-December 1803 gave Collins the capacity to seek a better site on the Tasmanian side of Bass Strait. This time Humphrey volunteered to join a small party that would examine Port Dalrymple, the only known harbour on the northern coast (Flinders, 1801: 15). Humphrey's narrative of the journey adds considerably to the reports of William Collins [1760?-1819] and Thomas Clark (e) [1756?-1828] printed in *HRA* (III) I: 583-585 and 585-587, respectively). A storm forced the leaky *Francis* to seek shelter at Kent's Group of islands (Appendix, note 38) where the *Lady Nelson*, overdue and feared lost on a run from Sydney to Port Phillip, was found safe. She was promptly requisitioned for the Tasmanian survey and the *Francis* sent to Sydney with news of the transfer. By this chance Robert Brown, a passenger on the *Lady Nelson*, and Humphrey came together. They were to be closely associated in the field during the following months. No lasting friendship may have resulted but the partnership had its effects on both men. While with Humphrey, Brown put down more about rocks and minerals in his

diary and notes (British Museum (Natural History), Botany and Mineralogy libraries) than at any time during his travels with Flinders (Vallance and Moore, 1981), and did so in terms much as Humphrey used. If Humphrey did not botanize in return it is noteworthy that the only known occasions he ventured into unexplored country were in Brown's company. Brown evidently inspired Humphrey to action. Humphrey's respect can be gauged from the care taken to indicate his association with Brown. The converse is less obvious though Brown did not quite forget his erstwhile colleague. A footnote in Jameson (1811: 450) refers to topaz from the Bass Strait islands which 'my learned friend Mr Brown, informs me, was first discovered by Mr Humphrey junior, who was some years ago sent out by the Government to examine the mineralogy of New Holland and Van Diemen's Land'. It is strange that neither Humphrey nor Brown mention topaz in their notes — if it were found during their travels together — and even stranger how long the identity of Mr Humphrey junior has passed unrecognized.

The excursionists returned with generally-favourable impressions of Port Dalrymple only to find Collins had decided already to move his settlement from Port Phillip to the River Derwent (Tasmania) where, at Risdon Cove, a party from Sydney occupied a camp set up in September 1803. During the removal Humphrey gained credit by volunteering to travel overland to the camp with news that the *Ocean* was storm-bound in Frederick Henry Bay. The episode is reported in official despatches; in the letters Humphrey gives his account — and exaggerates the distance covered. Of wider interest is his record of the foundation of Hobart on a site discovered by surveyor Harris. That Humphrey, rather as an exception, was called on to inspect the place before Collins ordered the move from Risdon is a fact apparently not otherwise known.

Some two weeks after reaching the Derwent, Humphrey and Brown with three colleagues and men to row the boats went up the river to the rapids (near the present New Norfolk) where a survey in 1798 had ended. The trip probably had no serious purpose but Brown botanized and Humphrey took the trouble to examine alum-enriched holes above the river. The locality is not specified though Brown, reporting a later excursion (27 March), mentions alum 'in the free stone cliffs about half a mile below Dart Head on the left bank (ascending)' (BM(NH), Botany Library, Brown diary f240). Geologically the occurrences seem to be like those at the 'Alum Rocks' (see *Walch's Tasmanian Guide Book*, 1871: 98).

The excursion (9-10 March) to the Coal River likewise covered known ground. Coal had been found there by men from the Risdon camp only a month or so before Collins's arrival; the discovery satisfied an instruction received by their commandant before leaving Sydney (*Hist. Rec. N.S.W.* V: 156). James Meehan [1774-1826] at the time surveyed the country north of Pitt Water and perhaps named the river. Humphrey's first, short visit can have allowed him opportunity for little more than a perfunctory view and the collecting of a few samples. The place soon gained a certain fame; even the lieutenant-governor announced his intention to examine the 'Stratum of Coals' (*HRA* (III) I: 317).

Table Mountain (now Mount Wellington), the towering backdrop to Hobart, had twice attracted Robert Brown to its summit before he and Humphrey made an ascent on 12-15 March 1804. Brown was first there (Brown diary f219 verso) on the day (18 February) Humphrey was inspecting the proposed site for Hobart. The story later put about in the *Hobart Town Gazette* (6 May 1826: 2) by Jorgen Jorgenson [1780-1841] that he had been with Humphrey on his first visit to the mountain is hard to credit. Until April 1804 Jorgenson was attached to the *Lady Nelson* — and she reached Sydney from Hobart on 14 March of that year.

Neither Humphrey nor Brown put down much detail concerning their first major

excursion into unexplored country, that in search of the source of the Derwent (27 March-5 April). Humphrey even failed to remember correctly the exact period they were away, that surgeon Mountgarrett was with them and that the rest of the party (nine in all) did anything but lose his specimens. How far the group penetrated on foot beyond the rapids at New Norfolk is not clear. Brown estimated they had marched fifty-three miles; Humphrey's figure of upwards of eighty miles, if not a wild guess, must include the distance travelled by boat. Giblin (1939: 24) thought it probable they had followed the Derwent for rather more than forty miles as the crow flies but suggested the last fifteen miles were along either the Clyde or the Ouse, not the Derwent. On this country Humphrey was later to settle; in 1804 its fertility escaped his pen if not his observation.

In his diary for 16 May 1804, Knopwood (Nicholls, 1977: 52) wrote: 'At 4 [p.m.] Mr Brown & Mr Humphry came to the camp; they had been out 16 days and got to the Huon by land'. Humphrey also gives 16 days for the journey which Walker (1914: 74) claimed began on 1 May. According to Brown, the party set out next day and although one learns to be as careful with Brown's calendar as with Humphrey's times and distances the botanist's record is accepted here. Furthermore, Knopwood has Brown dining with him on 1 May. On this journey Brown and Humphrey reached their objective by an arduous and hazardous route over the summit of Mount Wellington and then down the gorge of what is now called the Mountain River. Brown had tried once before, in mid-April, but was deceived into following the North West Bay River off the mountain back to the Derwent side. Now successful, he and Humphrey traced the Huon River downstream, discovering the Egg Islands on the way. Giblin (1939: 24), who knew the country, considered the venture a notable achievement, if one of questionable value 'apart from the botanical garland garnered by Brown'. He failed to notice they also collected rocks, and thereby left puzzles perhaps unresolvable as the samples are lost.

Again, the travellers left little in the way of topographical record. Tracing their route, therefore, is an uncertain business. In typically vague fashion Humphrey mentions that, finding it impossible to retrace their steps, the party was 'forced to steer for Storm Bay Passage' (D'Entrecasteaux Channel); Brown has them emerging at North West Bay. It is not known where they crossed the peninsula but the 'run of water' (cf. *HRA* (III) I: 292) found between the Huon and the Derwent suggests a passage near the present Port Cygnet. That district is a possible source of the so-called pitchstone of both Brown and Humphrey, and of the latter's green garnet. Pitchstone to these observers may well have been simply a dark, compact rock, not necessarily glassy or even igneous. Neither at any stage reveals much inclination to speculate as to the origin of rocks, thereby betraying an attitude to the contrasting doctrines that then divided geologists (Vallance, 1975: 22). One suspects both men would have preferred Wernerian views. But regardless of doctrinal affiliations, the most likely sort of rock they might have seen and called pitchstone on the Huon trip would be part of the intrusive complex at Port Cygnet. Many dyke rocks there are also remarkable for their phenocrysts of garnet (Edwards, 1947; Leaman and Naqvi, 1967). While the commonest garnets are brown titaniferous andradites, honey-coloured and even colourless varieties have been reported. No sign of green garnet at Port Cygnet occurs in recent literature or in collections studied by the author but from what other locality passed by Brown and Humphrey could such material have come? — assuming, of course, it was a garnet they found.

Humphrey's excursions into unknown territory virtually ended with this journey to the Huon. Knopwood, in June 1804, recorded that Humphrey and Harris had followed the Hobart Rivulet to its head but, by then, the effort was more survey than

exploration. The projected traverse of Tasmania, from which Humphrey was dissuaded by Collins as mentioned in the letters, became a reality for the mineralogist in 1807 — after others had pioneered a way. Brown, meanwhile, kept busy in the field — back to Mount Wellington where he made magnetic observations and to Bruny Island — before leaving Hobart on the *Ocean* 9 August 1804 bound for Sydney which he reached 24 August.

Detailed record of Humphrey's activities ends with his letter of 19 August 1804. The pattern of his first months in Tasmania was already changing. He had started with an impressive display of enthusiasm for scientific duty. Even in August 1804 he could write of plans to conduct experiments, grumbling, no doubt with justice, at the poor choice of apparatus supplied and the deficiency of reference books. But one notes also an increasing interest in commercial ventures unrelated to duty. The career of his then friend Lt Lord suggests that in him Humphrey found an enthusiastic guide to the ways of trade, ways the mineralogist seemed readier to adopt as the example of Robert Brown's diligence for science faded.

With Brown gone and Harris busy surveying, Humphrey all but disappears. Knopwood saw him from time to time, noting the occasions but not his business. The house built by Humphrey and Lord seems to have been used by the mineralogist only as a store and perhaps an investment to let. A year after reaching Hobart Humphrey still lived in a marquee, from which various of his possessions were stolen 19 February 1805 (*HRA* (III) I: 530). A map purporting to be based on Harris's survey of Hobart 1804-5 in Walker (1914: 60) shows separate places for Lord and the mineralogist. Neither was to continue in occupation of his residence, whether house or tent, beyond March 1805.

The despatch informing Governor King of Humphrey's appointment indicated that the mineralogist was to spend a short period with David Collins and then present himself in Sydney to receive such further instructions as the governor might 'think proper' (*HRA* (I) IV: 36-37). More than a year with Collins had passed and now King wanted to see the man sent to examine the minerals of his colony. Accordingly, on 2 March 1805 Collins advised London (*HRA* (III) I: 322) that Humphrey wished 'to extend his researches' at Port Jackson and was being transferred. It is not known exactly when he left Hobart. Knopwood says the *Sophia*, with Humphrey and Lord as passengers, left 7 March 1805 but two days later heard the vessel was still in the Derwent, held by adverse winds. Nothing more was reported until 21 April when the *Sydney Gazette* announced Humphrey's arrival by the *Sophia* two days before, adding that she had been 18 days from the Derwent, two of them spent at King Island. Just over a week later (30 April), the governor thought the mineralogist had come 'last Month' and expected 'some important and useful Discoveries' as soon as he began 'his professional pursuits' (*HRA* (I) V: 307). Humphrey's way was soon cleared by an official notice in the *Sydney Gazette* (4 May 1805) that he was 'to pass uninterrupted, and to receive such assistance in his Researches as his duty may require'. No doubt before Humphrey went anywhere he would have called on Robert Brown, then preparing for departure (23 May 1805) homewards on the *Investigator* — the ship Flinders had been forced to abandon as unseaworthy two years earlier.

Governor King's high-sounding announcements suggest he had matching expectations of his mineralogist. Writing to Banks on 20 May 1805, King remarked that Humphrey 'has a wide untrodden field before him, and, as I am told, he is very arduous and persevering. I hope science and the public will benefit by the result of his pursuits' (*Hist. Rec. N.S.W.* V: 627). It would be interesting to know the source of this good report; was it Collins, or perhaps Brown who had seen him at his best? But for all his hope, King seems to have had few thoughts for Humphrey's consideration.

By July, according to *HRA* (I) V: 498, the mineralogist had selected ten tins (another transcript — *Hist. Rec. N.S.W.* V; 659 — gives the word tons and may be correct) of iron stone for testing in England. Iron ore from New South Wales had been tested in 1801 (*Hist. Rec. N.S.W.* IV: 595, 608, 630-632) and another lot sent by H.M.S. *Glatton* in 1803. The material sorted by Humphrey was from a consignment sent by William Paterson [1755-1810], lieutenant-governor of the northern settlement in Tasmania, established late in 1804. Paterson or his men had found the ore in what he called the Rothsay Hills, beyond the Western Arm of Port Dalrymple. *HRA* equates these hills with the present Asbestos Range but the source, according to Twelvetrees and Reid (1919: 4) was the Ironstone Hills, just south of York Town. Humphrey and Brown had been near the place in January 1804. Brown's catalogue (BM(NH), Mineralogy Library), in fact, lists several specimens (now lost) variously described as 'iron stone' or 'Oxyd of iron' from different parts of Port Dalrymple, including Western Arm. Brown and Humphrey may not have been on the Ironstone Hills but clearly they found iron oxides in the district before Paterson and his people. Paterson, however, got the credit for discovery and Humphrey the labour of picking over the load sent to Sydney on the *Lady Nelson* in January 1805. Even the labour was vain. Humphrey's concentrate seems to have been that shipped by the *Sydney* on 12 April 1806. Ten months later came word she had foundered off the coast of New Guinea (*Sydney Gazette*, 15 February 1807).

Apart from sorting ore, the only task known to have been given Humphrey at this time was the examination of samples collected by Barrallier during his journey into the Blue Mountains (Vallance, 1975: 31). The study showed, at least, that the mineralogist had some awareness of contemporary ideas on the structure of mountains. In March 1804 (*HRA* (I) IV: 486) the governor had thought Humphrey himself might venture into the mountains but there is no evidence of such travel, nor indeed of any work in the limited tract of country then accessible overland from Sydney. It would be strange if Humphrey failed to inspect the coal mines at Newcastle but again the record is blank. There survives, however, evidence of a short stay on Norfolk Island. On 18 August 1805 Governor King wrote (Mitchell Library, Sydney, A2015 Gov. King's Letter Book 1797-1806: 495) to the commandant there informing him the mineralogist was about to leave on H.M.S. *Buffalo* and would take advantage of the ship's stay to make researches on the island. From the *Sydney Gazette* (25 August, 1 December 1805) it is known the *Buffalo* left Sydney 22 August, reached Norfolk Island 5 September and left there for the Derwent on 16 October. Humphrey's friend Knopwood noted his arrival (5 November) in Hobart and breakfasted with him 13 November prior to *Buffalo*'s departure for Sydney. By 27 November Humphrey was back in Sydney. Beyond these bare facts nothing can be found of what Humphrey achieved for science by the voyage. Regarding his private interests, the story is otherwise. According to a despatch dated 24 December 1805 from King to Collins (*HRA* (III) I: 346-347), Humphrey had sought from the governor confirmation of the large grant of land discussed with Collins in Hobart. Later, it seems, Humphrey protested that Collins misunderstood the nature of his request (cf. *HRA* (III) I: 353) but there need be little doubt the mineralogist was anxious to have land and have it in Tasmania.

Perhaps the shipment of 'rare and apparently valuable minerals . . . among which is pure asbestos combined with a ponderous ore, which is found in great abundance' (*Sydney Gazette* 24 November 1805), brought from Port Dalrymple, demanded Humphrey's attention in Sydney. The newspaper has no more about the collection. Humphrey, though stationed in Sydney throughout 1806, likewise escaped notice — except for a strange business that took him to court.

In the *Sydney Gazette* for 27 April 1806 there appeared under General Orders a notice to the effect that a girl, Harriet Sutton, had 'eloped' from the protection of a Mrs Palmer in Sydney and that her father, a convict storekeeper in Newcastle, was come to claim her. The notice went on: 'all and every person whatever are hereby forbid harbouring or illegally secreting the said Harriet Sutton'. A like notice, strengthened by the governor's command, was printed in the next issue and, a week later, a reward of 5 guineas offered for the girl's return, no questions asked. On 8 June the Provost Marshal announced Sutton's appeal to the governor against the verdict of the Court of Civil Jurisdiction in the case *Sutton* against *Humphrey* and that Harriet Sutton was to be delivered into his custody by 10 the next morning. There the newspaper let the matter rest. The governor's decision, if he made one, is not reported; in his last months as governor, King left many more pressing issues in abeyance. No further action seems to have been taken against Humphrey but his interest in the abduction is all but proved by later events.

During 1807 Humphrey returned to Tasmania. Knopwood noted his arrival in Hobart 14 June on the *Albion* whaler. She had left Sydney on 27 May and called at Port Dalrymple. Humphrey may have sailed on her from Sydney but the reappearance of his name on the Tasmanian civil establishment by the end of March suggests an earlier departure. One possibility is 24 March when the ship *Lucy* left to take Paterson back to his station at Port Dalrymple and with him a party led by Charles Grimes to survey northern Tasmania and an overland route to Hobart. Humphrey could have worked with Grimes — a proposal to do so seems a plausible reason for the Tasmanian visit — and left on the *Albion* before the survey ended. Against that, however, it must be admitted as strange that Paterson, a man noted for his interest in science, makes no mention of Humphrey in letters or despatches. Knopwood's record of the days following Grimes's arrival in Hobart (24 September) shows that Humphrey knew the surveyor very well, but then both had lived some time in Sydney. What is certain is that Humphrey accompanied Grimes on his return (6 October) to Launceston. The next occasion Knopwood saw Humphrey was on 26 December when the mineralogist reached Hobart again, having walked from Port Dalrymple in three days — doubtless with no great load of specimens. Meanwhile, on 25 November Knopwood was visited by one he describes as 'Mr Humphry's friend'. The identity of this friend emerges later, as in the entry for 27 April 1808 — 'Mr Humphry and Harriet dind with me'. The circumstances of her removal from Sydney are as obscure as those of Humphrey; one suspects both would have thought that fortunate.

Presumably it was William Bligh [1754-1817] who authorized Humphrey's travel. Bligh had succeeded King as governor in August 1806 and, as George Humphrey's covering letter (Appendix) to Greville suggests, the mineralogist in name at least need have been no stranger to him. Bligh had plenty of time to peruse the Humphrey letters before leaving England in February 1806. Whatever the purpose for which Bligh released Humphrey in 1807, a letter dated 5 November 1807 to Banks (*Hist. Rec. N.S.W.* IV : 380) makes it clear that the governor expected him to return in due course to Sydney. In that letter Bligh went on to ask if Humphrey were under any obligation to send specimens to Banks and what claim the government had on him — a strange enquiry to make about a government officer. Bligh was reasonably impressed with the man but troubled by his private affairs: 'He appeared a clever young man; but I am sorry to find bills to a large amount which he drew are come out protested, and I fear may be the cause of depriving him of his liberty'. Humphrey's father, in fact, had declined to meet bills presented without warning (Heuland to Rashleigh, 20 December 1808: DDR 5757/2/133). One wonders if the 'pursuit' that took Humphrey back to Tasmania was really an excuse to distance himself from the

governor's attention. Leaving that question as unanswerable, Tasmania must have had attractions for Humphrey; he already owned property there and it was conveniently remote if he meant to continue the liaison with Harriet Sutton.

Bligh need not have worried about Humphrey's liberty. It was his, not Humphrey's that was curtailed — even before the letter to Banks had reached its destination. The rebellion that deprived Bligh of his lawful authority gave Humphrey the chance to overlook the instruction about returning to Sydney. The mineralogist never again left Tasmania though he was careful to pay respects to the departing governor when Bligh called at Hobart on the way home (*HRA* (I) VII: 125). Knopwood's diary, hitherto a valuable source of information, fails at this stage — the volumes for the period 18 July 1808 to the end of December 1813 are lost. No doubt he commented on the dissensions that wracked Hobart society in the wake of the rebellion. Edward Lord, once Humphrey's friend, had modelled himself on John Macarthur of Sydney and now shared the rapacious Macarthur's hatred of Bligh. In December 1808, Lord provoked a quarrel with the surveyor G. P. Harris that got out of hand. Humphrey and Knopwood both became involved; their declaration defending Harris and other papers on the dispute are now in London (British Library, Add. MS 45157).

The public distraction can only have separated Humphrey still further from duty but at last, in 1810, came a sign of activity. It was to have unexpected consequences. A letter dated 2 February 1810 (*HRA* (III) I: 431) from Collins to Bligh's successor Lachlan Macquarie [1762-1824] carried as enclosures a sample of 'muriate of soda' (common salt) from the interior of Tasmania and a report by Humphrey on its occurrence. Sample and report are lost. Something of the locality, however, may be gleaned from an informative report (*HRA* (III) I: 758-773) on Port Dalrymple and vicinity prepared by John Oxley [1785?-1828] in the latter part of 1810. There (pp. 769-770) Oxley remarks that in 1809 a party gathered about a ton of salt from the Salt Lagoons, about halfway between Launceston and Hobart. Oxley also has a note (p. 770) on iron ore from Western Arm, taken to England in 1807 and tested at Portsmouth; according to the detail he gives, it was practically a pure hematite — magnetite mixture. One wonders if Humphrey had also selected this material.

Collins's letter drew attention to H.M. Mineralogist and, unlike his predecessors, Macquarie was not content to leave Humphrey to his own devices. He demanded monthly reports of progress. He also discovered Harriet Sutton and ordered her return to her father in Sydney. The order, given verbally when the governor met Humphrey in 1811, was repeated in writing to the commandant at Hobart (*HRA* (III) I: 458). There is no evidence that Humphrey obeyed but Macquarie's searching interest had its effect.

Writing to the governor 27 April 1812, Humphrey pleaded (*HRA* (I) VII: 622-623) that indisposition had prevented him making any researches since Macquarie's departure from Hobart in December 1811. He went on to explain how ill-health at various times had affected his work. Now he wished to resign his commission but to remain in Tasmania on an enlarged grant of land. The resignation was promptly accepted, effective from 30 June 1812, and Humphrey allowed to stay. Informing London (*HRA* (I) VII: 587), Macquarie spared nothing — 'Mr Humphrey, being Naturally an indolent Man, and of a Weakly and Sickly Constitution, has never made any Discoveries in this Country that are Worthy of Notice'. It was the man, not the office, Macquarie condemned. He went on: a man 'who has real Scientific Knowledge as a Mineralogist, Might be very Useful and Make Very important Discoveries in Various parts of this Widely extended Colony'. Such a person of robust constitution should be sent to New South Wales. Two years later he repeated the call (*HRA* (I)

VIII: 211) for 'an active, Clever, Scientific Mineralogist of respectable Character' — the antithesis of Humphrey as Macquarie saw him. No action was taken until 1823 (Vallance, 1975: 20) when a practical engineer and mineral surveyor with certain defined responsibilites became, in effect but not in title, Humphrey's successor; by then Macquarie's successor governed in Sydney.

For some of the unflattering opinion Macquarie sent to London, Humphrey could blame himself. The association with Harriet Sutton, continued in the face of repeated orders to desist, drew into sharper focus for the governor what little Humphrey seemed to show for eight years' official sojourn in the colony. He had started well and in the company of Robert Brown displayed commendable zeal for duty but by the end of 1804 that was being supplanted by a care for private interests. By 24 August 1807 J. H. Heuland could inform Philip Rashleigh (DDR 5757/98/1) that 'Mr. Humphrey at Botaney bay has no desire of returning, without a very great fortune'. Humphrey would never make that as H.M. Mineralogist. The indisposition offered to excuse his failure to furnish monthly reports seems transparent; disinclination might have been more honest. Humphrey had largely lost interest in his work. Macquarie, ever on guard against those he thought imposed on the government, clearly saw it that way and moved without delay to end Humphrey's career as mineralogist.

Macquarie's indictment, however, went too far. All blame lay with the man, none on the circumstances of his employment. The implied charge of deficiency in science makes one wonder how well Macquarie knew the manner of Humphrey's appointment and whether the governor's own slight acquaintance with science had not engendered false expectations of one officially called mineralogist. Unlike his naval predecessors, major-general Macquarie enjoyed no particular rapport with scientific circles in London. He could be sensitive enough to the needs of science — witness, for instance, his preferment of Charles Frazer [1788?-1831] as unofficial colonial botanist, and the despatch of rocks collected by Frazer and by Oxley to the Geological Society of London — but Macquarie was preeminently an efficient administrator, not a man of much subtlety. He may have sought reports from Humphrey but there is no evidence Macquarie was more interested than earlier governors in the mineralogist's results. Only exceptionally did any of them call on Humphrey for advice or direct him to make particular searches. This very lack of official concern can have done nothing to prevent aimlessness in a man so left to himself. For what purpose had he to strive?

According to Macquarie, Humphrey had found nothing 'Worthy of Notice'. The charge invites the question what might he have found? Coal was known and exploited before Humphrey arrived; iron ore, too, had been shipped to England for testing. Humphrey and Brown knew of iron ore at Port Dalrymple but Paterson, who came along later, received the discoverer's credit. In any case the colony lacked both capacity and need to develop a mineral-based manufacturing industry and no one in charge of a convict settlement like this would have welcomed the discovery of precious metals or gemstones. If these reduced the need for Humphrey's services, what was left? He could have gathered 'curiosities' — and perhaps gained a little from the sale of duplicates — but not much else. Even today, the areas that were accessible to Humphrey are hardly remarkable for mineral riches or choice specimens. In a letter to Greville dated 12 December 1804 (British Library, Add. MS 32439 f159) Robert Brown referred to his time with 'Mr Humphrey the Mineralogist of the Colony whose department I fear is fully as barren as mine'. Brown had the genius to make his barren field fruitful; to rebuke Humphrey, as Macquarie did, for not doing likewise is absurd. If in the end Humphrey failed to distinguish himself as H.M. Mineralogist, the greater fault lies, I believe, with the government that appointed a young man from

a London dealing business to a frontier post with no particular purpose. The beginnings of government patronage in the name of science in Australia were hardly auspicious but Humphrey's letters of 1803-4 reveal a person who could respond positively to what then seemed a challenge.

LATER YEARS

Humphrey's later career lies beyond the scope of this paper but as his interest in natural history to some extent continued a few notes seem justified. Humphrey was acting as a magistrate in Hobart even before his resignation as mineralogist. The appointment was eventually confirmed despite Macquarie's qualms. A succession of important posts followed — magistrate of all Tasmania, chief police magistrate, superintendent of police, member of the Executive Council and of the first Legislative Council in the colony. The relationship with Harriet Sutton was sealed by marriage at 'Pittwater' (Sorell), Tasmania, on 8 August 1812. Humphrey became a pillar of society, an upholder of law and order and of the rights of proprietors. In those interests, he supported the work of J. T. Bigge, the royal commissioner enquiring into the condition of New South Wales, during Bigge's visit to Tasmania in 1820. By then the commissioner's partiality to Macquarie's antagonists in Sydney was well known and Humphrey's enthusiastic collaboration with Bigge suggests that old scores were being settled. On two occasions, in 1813 and 1817, Macquarie had warned incoming lieutenant-governors (*HRA* (III) II: 23-24, 611) to be careful of a number of prominent citizens, Humphrey among them, whom he thought were unscrupulous. Ironically, Humphrey owed much to Macquarie for forcing a decision in 1812. The pension on which he retired in 1828 from the police post alone was more than four times his salary as mineralogist. Had he remained H.M. Mineralogist, would the chief justice have been a pall-bearer and the lieutenant-governor a mourner at his funeral (*Hobart Town Courier*, 23 May 1829)?

The old connections, however, could still be useful. On 6 May 1816 Humphrey addressed a letter to Macquarie (*HRA* (III) II: 588) explaining that his wife was coming to Sydney on a short visit (25 May-15 June) and would deliver his gift of 'some Specimens of Animals'. The letter following in *HRA* suggests a purpose for the unexpected gift. At the time Humphrey was seeking a more exalted magisterial position and the secretary in London to whom he had addressed a memorial on the subject advised application to the governor in Sydney. There is the possibility also, according to evidence discussed below, that Humphrey continued occasionally to send material to his family. A surer sign of connections maintained with London was his election to corresponding membership of the (Royal) Horticultural Society. Humphrey's property, then called Humphreyville but now Bushy Park, near Macquarie Plains, became a colonial show-place. Announcing the London honour, the *Hobart Town Gazette* (6 May 1826) added that the society 'could not have selected a more worthy and efficient associate than Mr Humphrey, who amidst the most arduous official duties, stands an unrivalled example in promoting the agriculture and gardening of this English Colony'. His old patron Greville, a founder of the society, surely would have approved.

HUMPHREY'S COLLECTIONS?

Not one specimen identifiable as collected by Humphrey has been traced, despite much search in the United Kingdom. What became of his samples? After all, collecting was a duty particularly assigned to H.M. Mineralogist. Official records yield

no information about Humphrey's specimens — apart from the salt from Tasmania in 1810. Indeed the pointed remarks about Humphrey made by Bligh and Macquarie suggest those governors saw little evidence of the mineralogist's collecting. Yet at least one shipment went off to London during Bligh's term of office — a fact known not from despatches but from a stray remark of Heuland (DDR 5757/98/1 — 24 August 1807) that H.M.S. *Buffalo* was bringing from Humphrey 'Several boxes of his collecting' for the government. Colonial administrators, as well as their masters in London, apparently deemed such consignments unworthy of notice. If the collections were not thrown out with the rubbish where would they have gone? The British Museum comes to mind as an obvious repository but the principal record there — the manuscript Additions Book (1756-1876) held by the Keeper of Minerals — makes no mention of relevant donations from the department of war and the colonies.

The earliest gifts of Australian minerals to the British Museum came from Sir Joseph Banks. There are no clues in the Additions Book as to how Banks acquired the samples but official sources seem likely. Banks had long been recognized by British governments as a scientific adviser on New South Wales. Perhaps he, rather than the secretariat in Downing Street, was the consignee for scientific collections made in Australia for the government. At any rate, on 9 December 1809 the museum trustees received from Banks several specimens of minerals from New Holland. What they were is not specified but on 10 February 1810 Banks gave a 'Topaz (crystallized, white) from New South Wales'. Another 'Minerals (4 specimens) from New Holland' followed from the same donor on 8 June 1811. Brown or Paterson or Humphrey is each a possible collector, with Brown the least likely — his material ought to have formed part of the Admiralty's donation received 6 April 1811 (Vallance and Moore, 1981). The topaz draws attention to Humphrey for he, according to Brown (Jameson, 1811) first found that mineral in Australia and despite Jameson's remark about topaz in the Hawkesbury River the mineral then could have come only from the Tasmanian region. Whether Humphrey at the time had museum-quality material may be questioned. The samples he had sent to his family were condemned by Heuland on 27 February 1808 (DDR 5757/2/106) as 'rolled' [i.e., abraded]. Presumably they had been collected from beach gravels. Good material, however, was already known. Heuland, in the letter just noted, refers to a 'nest of topazes' found by Paterson and adds that a gentleman had arrived in London with 'a very perfect crystal of Topaze'. The gentleman is later (DDR 5757/2/109 — 7 March 1808) identified as 'Lt Tetly'. J. S. Tetley was a junior officer on the vessel that took Bligh to Sydney but while there was chiefly involved in an acrimonious dispute with his commanding officer that led to both being returned to London in 1807, the captain to face a court-martial which found the charges against him groundless (*HRA* (I) VI). Tetley's topaz, presumably acquired in Sydney, passed into Rashleigh's collection (*fide* Heuland), not the British Museum.

Whether Paterson or Humphrey or both were the sources of Banks's donations to the British Museum are now matters of academic interest. Search of the museum's mineral collections, made with the generous co-operation of the curator, P. G. Embrey, Esq., has failed to locate any of these samples. Nor was anything that might be due to Humphrey found in the Greville Collection.

The minerals and shells known to have been received by Humphrey's father in 1804-5 likewise cannot be traced. And it is clear from Heuland's letters that these were not the only collections sent to the family. George (II) Humphrey apparently had no auctions at this time but, of course, samples could have been dispersed through the shop. If George (II)'s circumstances were as bad as Heuland suggests (DDR 5757/2/126 — 21 October 1808), cash sales would have been welcome. There is the

possibility also that some of Humphrey's specimens went to his aunt. The Forster sales of 1808, mentioned earlier, included nearly 70 lots of Australian shells, most of them simply listed as from New South Wales or some variant thereof but 20 specified as of Van Diemen's Land [Tasmania]. Against the easy assumption that these came from Humphrey, his own remark in the letter of 17 November 1803 (Appendix) that southeastern Australia was already a known source of fine shells must be noted.

Other intriguing examples of Australian material at auction occur in the mineral sales of J. H. Heuland. Russell (1950) gives a list of those sales for the period 1808-48; to it should be added that of June 1817, known from a catalogue in the library of the U.S. Geological Survey. Search of the catalogues known to Russell, from the first to that of 1839, reveals a number of Australian items, every one of which could have been gathered by Humphrey. Whether he did, of course, is another matter. At the time Heuland began his sales, any dependence on Humphrey seems improbable. Early in 1808 Heuland scorned Humphrey's topaz specimens and on 20 December of that year informed Rashleigh (DDR 5757/2/133) that 'Addy in New South Wales [had] turned out not to be what was expected from him.' The judgement might refer to Humphrey's failure to supply fine specimens but perhaps more likely it reflects on the mineralogist's private affairs. Either way, Heuland seemed ready to bracket 'Addy' with the rest of the Humphreys and they, he thought, were trying to deprive him and his uncle in Germany of their inheritance. The attempt to cheat Heuland and Heinrich Forster, if indeed there was such an attempt (we have only Heuland's word for it), did not succeed. Heuland came into his own; whether thereafter his attitude to the Humphreys mellowed remains unknown. But let the record of Heuland's sales appear.

The first Australian sample offered by Heuland was lot 3 ('Green garnets, New Holland') on the 4th day (7 May) of the 1812 sale. Such had been reported by Humphrey during the Huon trip of 1804; another possible source, King Island, was visited by Humphrey as early as 1805. 'Primitive and modified grossular, New South Wales' appeared in lots 32 and 96 on the 3rd day of the March 1816 and the 8th day of the April 1816 sales, respectively. At the time, such Australian material could only have come from Tasmania or the Bass Strait islands. Nothing more turns up in the sales until that for May 1829 when on the 5th day 'A matchless Crystal of white transparent tredecioctonal [sic] topaz, from New Holland' (lot 778) was offered at £5 — and bought by Louisa, Countess of Aylesford [1760-1832], for £5.15.0. It can be traced to no. 5199 [5025] in the Aylesford MS Catalogue (BM(NH), Dept of Mineralogy) but the specimen went back to Heuland when he bought the collection after Lady Aylesford's death. Another topaz from New Holland was put up at £3 in the May 1830 sale (3rd day, lot 402) and yet another (lot 9) at £2 on the 1st day of the sale in May 1835. Heuland in 1820 had sold crystals of topaz from 'New Holland' to the English collector C. H. Turner of Rooksnest, Surrey; descriptions of them can be found in Lévy (1837: 267-8, 274-6). Turner's collection eventually became the property of the Museum of Practical Geology (now Geological Museum) London, but neither there nor in Lévy's catalogue can the provenance of these Australian topazes be traced.

Heuland's 1833 sale introduced different sorts of Australian specimens, all specified as from Van Diemen's Land. No fewer than nine lots consisted of or included material variously described as fossil wood or wood opal. More such samples appeared in the April and May sales of 1834. Again, there is no indication of provenance but it will be recalled that Humphrey saw things like these at the Coal River as early as March 1804. The locality was not remote and he could have returned there many times during his years in Tasmania. The sale of May 1835 is the last at which anything

possibly related to Humphrey went under the hammer. Catalogues for the next six sales (1836-39), in fact, list nothing from Australia. Was that gap connected with Humphrey's death in 1829? To this, and so many other questions no answers have been found. They may well remain unanswered unless more of Humphrey's and Heuland's letters are unearthed. The latter's business records would be another obvious source, but the chance that they survive now seems remote (cf. Russell, 1950). The thought that Heuland handled Humphrey's specimens in his sales meanwhile depends on no firm evidence but it is surely remarkable that, without exception, the sorts of Australian materials sold by Heuland to the year 1835 were those first found here by Humphrey. So much has yet to be discovered about the first scientific officer on the colonial establishment in Australia. One conclusion, however, seems already justified. Humphrey was not really the indolent free-loader Macquarie represented him to be. Considering his background and more particularly the circumstances of his employment, Humphrey deserves remembrance as a pioneer of Australian science.

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APPENDIX HUMPHREY LETTERS

In the following transcript from British Library Add. MS 42071 (Hamilton and Greville Papers, Vol. IV, ff123-145) original spelling and punctuation are preserved; folio numbers are inserted to facilitate reference to the manuscript. Superscript numerals relate to end-notes. Place-names, other than those obsolete or unusual, are not noted. The series is introduced by a letter from George (II) Humphrey [1739?-1826] to Charles Francis Greville [1749-1809] and concludes with a transcript of the lieutenant-governor's certificate regarding the service of H.M. Mineralogist (A. W. H. Humphrey). Additions by George Humphrey are marked [G.H.].

[f123] Sir,

Herewith You will receive the Extracts from my Son's Letters, which, you will perceive, have proved more voluminous than I had given You reason to expect: But as my Son is in a great measure amenable to You for his Conduct, and as I learned that Governor Bligh would not go for some days, I thought it but proper that You should have a Copy of his whole Narrative, Private Affairs excepted.

Any Trivialities, or Incorrectness, You may find in the Perusal, I trust You will candidly overlook, making Allowance for his Youth and Inexperience.

I am rather unwell to day, or should have waited on You; but shall do myself the honor of calling on You Tomorrow Morning. I am respectfully

Sir,

Your most Obedient & obliged humble Servant
George Humphrey

Leicester Square

25th Sept^r. 1805.

Right Honble Charles Greville

[f125] Extract of Letters from A.W.H. Humphrey, Mineralogist to His Majesty in the Settlements at New South Wales, and who sailed from the Isle of Wight, in the Ocean Transport, Cap^t. Mertho 28th April 1803.¹ [G.H.]

Rio de Janeiro, Brasil.
17th July 1803

I hope You received my Letters, and small Box [These Letters and Box have never come to hand. — G.H.] from Teneriffe,² and that the Shells &c turned to good account.

We had a fine Passage, as we arrived here the 3d inst,³ and I have been ever since employed in collecting Shells to send You, therefore You must not expect to have a detail of our Voyage: I will, however, give You some few particulars of the City and People of S^t. Sebastian.⁴

The City is large, and contains, as I am informed, about 100,000 Souls, of which about 40,000 are Whites and Mulattos, and 60,000 Blacks. The Streets are narrow, and very dirty, and the Houses low. There are many grand Churches: For the building and ornamenting of which they spare no expense; one of them is built of the same kind of Granite as the Specimen I have sent You in the Box [This Box has also not been received. — G.H.]; and the inside of another is lined with the most beautifully carved Cedar and other fine Woods. Their Religious Ceremonies are grand, and frequent, and nothing pleases them more than Strangers paying respect to them. The People are very polite and friendly to the English; for instance, as Lieut Lord and myself were walking up the main Street, a Servant ran up to us, and pointed to a large House, at a short distance: We followed him to the Door, where we were received, in the most polite manner, by a Gentleman, who shewed us up Stairs, and introduced us to another Gentleman, and two Ladies; the latter Gentleman welcomed us in English, and made us take Tea. After some Conversation we found he was a Member of the Senate, & Judge of the State. He detained us till ten o'Clock that Evening, and, on leaving him, he begged we would consider his House as our own; and we have spent

many pleasant Evenings with him and his Family. I could mention several other Adventures of a similar nature I have met with, but have not time for it.

I have been endeavouring, ever since we arrived here, to get some Minerals, &c. but, strange to tell, I have not seen even one good Stone of any sort. A few Topaz Rings were brought to me, of a large size, but all foul: One was about 1½ Inch by 1 Inch, and of a good colour; the Person who brought it asked Ten Pounds for it; and I have seen none so cheap, as they are to be had in London. The good Stones are all sent to Lisbon.

[f126] I am happy to say I have got many good Shells, part of which I have packed up in a Box, with the remainder of the Shells I got at Teneriffe, and some Volcanic Stones of that place: The Box [This Box, as beforementioned, has not been received. — G.H.] is directed to J. T. Swainson Esq.⁵ Custom House, London, and marked G.H. and I shall leave it here with a very rich Portuguese Merchant, with whom I have been dining to day; and who leaves this Place, in one of his own Ships, in about two Months, bound for England direct; and, I am informed, she will be with you sooner than any other Ship. He is a very polite, Gentlemanlike Man, and has promised to procure a large Parcell of Shells, and other Things for You. He will bring You a Letter from me [See page (127) — G.H.]

My Hat was stolen off my head, by a Negro, the other Night, therefore be so good as to send me another Water-proof one, as soon as You can, and a Looking Glass.

We shall, most likely stop at the Cape of Good Hope; and, if so, you will hear from me from that place.

Have the goodness to send me one of Carey's⁶ small Pocket Globes, for the one I had has been stolen from me. I will give you a long account of all these things when I arrive at Port Philip.

The Gentleman I before mentioned, who will bring You the Box of Shells, &c. is Marius da Costa Esq.⁷ and I must recommend him to Your Favor. He has assured me he will employ Men to collect Shells, Minerals: &c, and, if possible, to procure some Groups of Topazes, Emeralds, and other Stones, which he will take with him to London for You.

Before I close my Letter, let me beg you to send me, as soon as You conveniently can, Nicholson's Introduction to Natural Philosophy,⁸ and the Models of Crystals, and Instrument for taking the measure of the Angles of Crystals,⁹ M^r. Accum¹⁰ promised to procure for me, from Paris; as also small Specimens of all the new Minerals you can obtain.

This Letter, and the one from which the preceding passages were transcribed, were received by the Lisbon Mail 5 Sept. 1804 [sic]. [G.H.]

Rio de Janeiro, Brasil.
18th July, 1803.

The Bearer of this, Marius da Costa Esq.^r. is a Gentleman from whom I have received great kindness at this Place. I therefore beg to recommend him to your Friendship and Favor.

He brings with him, in one of his own Ships, a Box for You, directed to J. T. Swainson Esq.^r. Custom House, London, and marked G.H.

M^r. Da Costa has kindly promised to procure for You some Topazes, Emeralds and other Stones of this Country [f127]: and Sea and Land Shells, all which you will, I hope receive by this Opportunity. My best Respects to M^r. Greville.

This Letter was received per favor of Mr. Bromley¹¹ (then Surgeon of the Calcutta armed Ship) 9th Sept^r. 1804 [G.H.]

*Sullivan Bay, Port Philip,
New S. Wales, 15th Nov. 1803.*

After a Voyage of Eleven Weeks we arrived here, and came to Anchor on the Morning of the 13th October.¹² I shall not say much about what passed on our Voyage in this Letter, as I shall send you a long Account by the Calcutta, but that we have had several Gales of Wind, such as no one can have any idea of, who has not doubled the Cape of Good Hope; not that I make use of my Licence, as a Traveller, on this occasion.

In one of these Gales, which came on about ten days after we left the Coast of South America, we parted from the Calcutta,¹³ in the night, and, in the morning She was not to be seen; nor did we see her, or any other Ship, till after our arrival at this place.

The Captain of the Calcutta¹⁴ had, unfortunately, given our Commander strict Orders, in case of the Ships parting Company, not, on any pretence whatever to put into the Cape, but make the best of his way to Port Philip; which Order greatly disappointed me, and placed us in a very disagreeable Situation, for before two Months were elapsed our private Stock was expended, and we were necessitated to eat the Ship's Provisions, or starve, which was nearly the case with me, for the Beef was so bad, smelling like the steam from a Tallow Chandler's Copper; and the Bread having got wet, and mouldy was full of live Insects. I could not stomach either, and actually lived on Water-Gruel for 14 days: But this is passed, and we are a little more comfortable.

This is a healthy place,¹⁵ but never can do for a Settlement, for there is no fresh water to depend on; we are supplied from Wells dug in the side of a hill; and there is no good Soil, every where Sand. The Governor expects to remove as soon as he can hear from Port Jackson.

I have sent by Cap^t. Mertho,¹⁶ of the Ocean, who will leave us tomorrow for China, a small Box [This box was brought by Mr. Bromley, see page 128. and page 131. — G.H.] containing Shells and Stones of this place (directed for J. T. Swainson Esqr.) the best I have been able to get, though not so good as I hope to send hereafter.

I have been under the necessity of drawing on You for £17.18.0 to make up my proportion to the Mess we have formed here, as it is the Governor's desire that the Civil and Military Officers mess together, for which purpose a Mess-House is building. I am allowed two Servants by the Governor,¹⁷ and have my Marquee pitched upon the same Hill¹⁸ with himself and the Chaplain,¹⁹ and his Excellency has done every thing in his power [f128] to make us happy: To hear from You would, however, contribute very much to make me so.

Permit me to introduce to Your Friendship Cap^t. John Mertho of the Ocean Transport, to whom I am indebted very much, by his kind attention to me on my Passage out. My best Respects to Mr. Greville and Count Bournon.²⁰

I intend to volunteer to go across the Country to Western Port, with Mr. Harris,²¹ who is ordered on that Service.

Received per favor of M^r. Bromley 9 Sept. 1804. [G.H.]

*Sullivan Bay, Port Philip,
New South Wales
17th Nov^r. 1803.*

By the Ocean Transport that left this place Yesterday for China, I have sent you a small box of Shells and Minerals, and a Letter, both intrusted to the care of my Friend Cap^t. John Mertho, the former directed to J. T. Swainson Esq^r. — Cap^t. Mertho has promised to forward them by the first Ship that leaves China for England, after his Arrival there.

The Shells are not such as I had hoped to have sent You, being all from the Beach, though many of them were taken alive, and mostly broken, and rubbed, but I hope soon to get some in the highest state of Perfection.

The Minerals I have sent, I am sorry to say, are but of little worth to you, though they are, and ever will be, of great consequence to the Colony: Those I allude to are, Carbonate of Lime, and Brick Clay. The former has not been discovered at Port Jackson, though no pains, as I am informed, have been spared by the Governors of that Colony to find so valuable and useful a Substance.²²

According to my Promise, I will now relate a few Particulars of our Voyage from Rio de Janeiro to the Coast of New Holland, and then give you some account of this Port, and what has happened since our Arrival.

On the 20th July 1803, at 7 in the Morning we weighed Anchor, and at 11 passed by Fort S^r. Crux²³ and cleared the Harbour, following the Calcutta at about 4 Miles distance. The Wind now began to die away, and the Tide setting strongly into the Harbour, hurried us very rapidly towards the Shore, and at 3 we were obliged to let go our Anchor, to save us from being dashed to pieces by the Surf on the Rocks: Fortunately for us, however, in a quarter of an hour a fresh breeze sprang up, and we again weighed, and stood out to Sea, the Calcutta Hull-down, and in the Morning were out of sight of Land.

On our leaving the Harbour the Calcutta sent a Boat to us, with a Letter for Cap^t. Mertho, ordering him, in case of parting Company, to make the best of his way to Port Philip, and, on no pretence whatever, to put in to the Cape of Good Hope.

About a Week after, we parted Company in a heavy Gale of Wind; and in eleven Weeks made the Land of New South Wales, at 11 in the Morning, with a fair Breeze from the S. West. By night we were well in with the Shore, stood under easy Sail all night, and in the Morning stood into a large Bay, in which from our Latitude and Longitude, we supposed the Entrance to Port Philip must be.

At Six we saw an Opening, for which we steered a direct course, and at 11 we were well in.

[fl29] It now began to blow a Gale dead on Shore, and the Captain began to be uneasy, as he feared, if this was not the Port, he would not be able to beat off the Coast; and we could see with our Glasses the appearance of Breakers, with a Surf running over them, completely across the Opening.²⁴ We were all greatly alarmed, the Captain not excepted, as I could see by his looks, though he said but little.

At this moment, M^r. Collins,²⁵ late a Master in the Royal Navy, volunteered his Services, to go in an open Boat, and, if possible, to examine the mouth of the Harbour; which Offer the Captain accepted; the Boat was lowered, and six able Hands, with Collins, went off, having with them a Flag, which they were to hoist, in case they should find it to be Port Philip, or any other safe Place of Shelter; our Ship in the mean time was laying to, under her Main Top Sail.

In an hour they returned, not having hoisted the Flag, and the Wind blew so strong, and the Sea running very high, we were fearful of their being lost. They returned safe, however, but with the dreadful Information, it would be impossible for any Ship to go in, as there was the Appearance of Breakers completely across the Mouth; on hearing which, I thought the Captain, though a brave Man, would have sunk on the Deck, and he exclaimed, My God, what shall I do! But, recollecting himself, he called to his Men to get the Mainsail set, and every other it was possible, though it blew a heavy Gale, and to our great satisfaction we found we were getting off Shore very fast. At four we were 12 Miles off Shore, and Cap'. Mertho observed we must have had a strong Tide, which hurried us off, or we should not have got so far in so short a time.

In the Morning the Weather was fine, and had every appearance of continuing so, and we again stood into the Bay, being persuaded the Harbour we had seen must be Port Philip. When we got within six Miles, Mr. Collins went in the Boat again, and, in about an hour, we perceived him in the middle of the Channel, and, a few minutes after, we saw the Flag, as a Signal that it was Port Philip, and that we were to follow, which gave us all the greatest joy. We made Sail, and soon got to the Mouth of the Harbour, where we found that the Appearance of Breakers we had seen the day before, was occasioned by the Tide running out of the Port at the rate of nine Knots an Hour, and the Wind against it. We were, unfortunately, at a wrong time of Tide again, for though we had a seven Knot Breeze, we could not tell whether we went ahead, or astern: A stronger Breeze at length sprung up, and we got in, and, at three, came to single Anchor, to the no small pleasure of all on board.

The Captain went on shore immediately, in search of Fresh Water, and did not return that Night. The next Morning a Man at the Mast head said he saw a Sail, and in half an hour we had the pleasure to see the Calcutta at Anchor, about three quarters of a Mile from us. I then got my Razors in good order, and began to shave off my long Beard, for I had not shaved since our leaving Rio de Janeiro: By the time I had done this, and cleaned myself, the Captain returned, saying he could find no good watering [fl130] Place, nor any good Soil, which last I had myself observed the day before.

As soon as a Boat could be got ready Mr. Fosbrook,²⁶ Mr. Harris, Mr. Bowden and I went on shore, with the Surgeon of the Ship. As we came near the Land, every one was eager to be the first on Terra firma; I sat still till the last, when seeing the Boat was almost on Shore, I made a Spring, and was the first of His Majesty's Officers on land; when, drawing my Sword, I exclaimed, I take possession of this Country in the Name of the King of England!

We walked about ten Miles in the Woods, keeping along Shore, and during the whole of this Walk, we found no Soil but Sand, coloured by Charcoal, formed by the Natives Fires. The Trees were all small, and there was no Underwood, nor any appearance of fresh Water. We returned on board, and, as soon as Cap'. Mertho was ready, Lieuts Sladden²⁷ and Lord²⁸, and myself, went with him on board the Calcutta: We found all well, and learned that they had been driven into the Cape of Good Hope, by a Gale of Wind, in which they had sprung their Fore-Yard.

The Next Morning Cap'. Woodriffe and the Governor, went in search of a place to land the People and Stores; and, after four days they fixed on one, the best in the Port, although a very bad one, for we have no Water but by sinking Tubs, with holes in their sides, in the declivity of a Hill, for the Water to drain into, and no Boat, of any size, can come within half a Mile of the Shore.

The Camp was formed, and the Ocean's Cargo landed in less than two Months, the Governor not being able to detain that Ship, as she was going to China. During the time the Ocean was unloading, Mr. Harris, the Surveyor General, Lieut Tuckey,²⁹ and Mr. Collins, made a Survey of the Harbour; and, from their Report, the Governor was

induced to send M^r. Collins, in an open Boat, to port Jackson, to inform Governor King of the State of the Colony;³⁰ which Service M^r. Collins volunteered, and every thing being got ready under his own inspection, he put to Sea with a fair Wind.

A Week afterwards the Ocean sailed out of the Harbour for China. The Public Works of the Camp were carried on; a Battery was erected, and a Magazine of Stone, for the Powder, was almost completed; most People had got Gardens, and every thing was as forward as the Soil would permit. A signal Post was erected on a high hill, commanding the Entrance of the Harbour, and the Men on the look-out were ordered, on the first appearance of a Ship, to hoist a flag on the Staff, as a Signal to the Camp.

[f131] On Monday the 12th December, the Signal was made, and I immediately went to the Hill, about two Miles from the Camp; and, on looking through a Glass I pronounced the Ship in sight to be the Ocean returning. At three she entered the Harbour's Mouth, and, at four came to an Anchor off One-Tree-Point, three Quarters of a Mile from the Calcutta.

At five Cap^t. Woodriffe came on shore, with Cap^t. Mertho, and M^r. Collins, whom Cap^t. Mertho picked up at Sea, half-way between here and Port Jackson, in a Gale of Wind: A dreadful Sea was running at the time, and it is most likely he would have been lost, had he not fortunately fallen in with the Ocean. — Cap^t. Mertho did not intend to touch at Port Jackson, but, feeling for the Situation of M^r. Collins, should he leave him, and another Gale come on, he resolved, as the Wind was fair, to put in for 24 Hours; which he did, and M^r. Collins was landed in Safety.

On hearing the State of the Colony, Governor King sent for Cap^t. Mertho, and made him an Offer to return hither, and move the Colony to some other part; which Offer Cap^t. Mertho accepted, and he is taken up for four Months. The Lady Nelson Brig sailed from Port Jackson 24 Hours before the Ocean, for this place, but is not arrived, and it is feared she was lost in a Gale of Wind, the day after the Ocean left Port Jackson.

Wednesday the 14th. This day arrived the Francis Brig from Port Jackson, and, as soon as she can be got ready for Sea, being 9 Years old, and out of repair, M^r. Harris, M^r. Collins (and I shall this day volunteer my Service to go with them) will undertake to Survey Van Diemen's Land, and the Islands about it, among which, as I am informed by the Master of the Francis, the fine Shells seen in England from this part of the World were got.

The Box [See page 128. — G.H.], which Cap^t. Mertho had in his charge, directed to J. T. Swainson Esq^r. Custom House, London, I have given in charge to my Friend M^r. Bromley, Surgeon of His Majesty's Ship Calcutta, from whom M^r. Swainson will receive it.

It is likely we shall remove to Van Diemen's Land, but that will be determined by the Survey.

The Journey, mentioned in my first Letter from hence, I did not go on, as the Surveyors M^r. Harris and Lieut Tuckey were accompanied by the following Gentleman who went for pleasure, which I knew could not agree with Service; M^r. Bowden³¹ First Assistant-Surgeon; First Lieut Johnson,³² Second Lieut Macculloch,³³ both of the Royal Marines; and M^r. E. White,³⁴ purser of the Calcutta. They had with them seven Men to carry Provisions, &c. On Friday the 9th December, at 4 in the Morning, they left the Camp, and returned on Monday the 12th, at 5 in the Evening.

The Mess of the Civil and Military Officers of this place will be very comfortable, as soon as it can purchase Stock to breed for its use, and will then be a cheap Mess: Its Regulations are, that no Member of the Mess can, on any pretence whatever, have more than One Pint of Wine a day, except when the Governor dines there; and His

Excellency is to be considered as a Mess Visitor. Any Member of the Mess inviting a Stranger, can, on paying for the same, have a Pint of Wine for his Friend, but no more. No Member can dine in his Marquee (excepting he is ill) from the Mess Stock, or have any Wine out of the Mess, except he is going [f132] on a Journey, in which case he can draw his pint for as many days as he thinks he shall stay.³⁵

From the Master of the Francis I learn, that the five Shilling Tea in England, sells for fifteen Shillings at Port Jackson; that the moist Sugar of seven Pence sells for half a Crown the Pound; and that Brandy and Rum has been known to fetch three Guineas the Quart Bottle: In short, any thing may be purchased for a small quantity of Rum, Tea, Sugar, or Soap, when Money could do nothing.

I have two Convict Servants; their Names are Robert Kennedy³⁶ and John Smith. Give my best Respects to M^r. Greville, Count de Bourron, and D^r. Crichton.³⁷

16th Dec. 1803.

Received per Cap^t. Mertho, of the Ocean Transport 11th Sept. 1805 [G.H.]

*Hobart Town, Sullivan's Cove,
River Derwent, Van Diemen's Land.
1st August 1804 -*

In my last I informed You it was my Intention to request permission to accompany M^r. Collins to Port Dalrymple; & in his Search for the Lady Nelson, then supposed to be lost on some one of the Islands in the Straits.

On the 18th December 1803, the Calcutta sailed out of Port Philip, with the Wind at S. W. fair through the Straits.

On the 20th I waited on the Governor, and gained his permission to go in the Francis Schooner. Immediately after which he gave Orders to the Master of that Vessel, to furnish me with as comfortable a Birth as possible; and on the 23rd His Excellency went on board the Schooner to examine the Accomodations, and, on his return, informed me they were tolerable for so small a Vessel.

On the 24th we dropped down to the Harbour's mouth, and, early on the 25th sailed out of Port Philip for Kent's Group; but owing to the ignorance of the Master, on the 27th, at ten in the Morning, we found ourselves 18 Miles beyond, or to leeward of the Group: It blew a Gale of Wind at the time, and our Pumps were kept constantly going to keep the Vessel above Water, as she made 13 inches an hour; and would go to Windward but very slowly. We beat about all day and night in this distress, and, at twelve the next day fortunately got in, and found the Lady Nelson there, in good condition, waiting for a fair Wind, having been repeatedly driven back by Gales.

It being unsafe to proceed in the Schooner, M^r. Collins wrote a Letter, on Service, to the Commander of the Brig, stating our Situation, and requesting he would convey us to Port Dalrymple, and order the Francis to proceed to Sydney: These requests he complied with, to my unspeakable Satisfaction.

The Group is composed of five Granite Rocks, on the largest³⁸ of which I got some Specimens of Feldspar, [f133] and black Shorl; and, on the highest part of the Rock, some detached pieces of Carbonate of Lime! which Substance was by no means thinly scattered.³⁹

A fair Wind springing up, we left the Group in a hurry, and in the Morning after we

sailed (the 1st of January 1804) arrived at Dalrymple; and as soon as the Brig had come to an Anchor, Mr. Brown,⁴⁰ late the Botanist of the Investigator (which Gentleman I had the good fortune to find on board the Lady Nelson) Mr. Simmonds,⁴¹ the Commander, Mr. Collins, Mr. Clark,⁴² a Superintendent, and myself, went on shore on Sandy Beach.⁴³ Mr. Brown stopped in a Valley attracted by some Plants. Mess^rs. Collins, Simmonds, Clark, and I walked on about seven Miles up the Harbour. About four Miles from the Brig, Mr. Simmonds, finding himself fatigued, laid down on the Grass, where we left him.

When we got to Outer Cove,⁴⁴ we heard a noise in the Bushes, and, in ten Minutes found ourselves nearly surrounded by Fire: We had therefore no other way than to run for the Water with all Speed; but unfortunately, Clark is lame of one leg, the use of which he lost, from extreme Cold, at the time of the Guardian's distress,⁴⁵ and is one of the few who bravely remained on board. We, however, escaped the Fire, but were no sooner clear of it, than we fell in with one of the Natives of the Country, who screamed in a dreadful manner, and ran in among the Bushes.

As we had but two Guns with us, we thought it imprudent to stay, and walked off as fast as Clark's lameness would allow; We soon, however, had a number of the Natives running after us, shouting and crying out; One of them threw a Spear at us, but did no hurt. We stopped, and put down our Guns, and made Signs of Friendship; but they beat the Trees with short Sticks which they had in their hands, and talked very quick and loud; so finding we could do nothing with them, we walked off as fast as we could. We soon found Mr. Simmonds, whose Gun strengthened our force, and seeing our Party increase, the Natives slackened their pace, and, by the time we were abreast of the Brig, we could see no more of them: This was a warning to us.

On the 3d we went up to Outer Cove in the Brig, and, on the 4th had an interview with two of the Natives, on a Hill,⁴⁶ about 3 Miles inland. They were very friendly at first, but soon went away, and returned with a great number of their Friends, who, after they had got all they could, behaved so ill, that, at the moment one of them was going to spear Mr. Brown, we fired on them: They fled to some distance, but watched us to our Boat.

On the 5th we proceeded to Western Arm, and, on the 6th I went with Mr. Brown to a Hill⁴⁷ 12 Miles inland, and got some curious Mica, Slate, &c. and returned the same night.

On the 7th we got under way, and went up the [f134] Eastern, or principal Arm of the River, several Miles farther than Cap^t. Flinders and Mr. Bass had been,⁴⁸ and, at five in the Afternoon, ran aground in four feet Water: however, we soon got off again.

The 8th was employed in looking for Water, which we were in great want of; and, on Monday the 9th Mess^rs. Simmonds and Collins, after searching all day, found a most beautiful Fall⁴⁹ of fresh Water, and returned with two Casks of it, which were a great comfort to us, as we were all ill, from drinking the Water we got at Kent's Group, which, though it ran down the Rock from a considerable height, was very brackish!!

On the 10th Mr. Brown and myself went to the Fall: It was interesting and beautiful, but we had no time to examine it, Mr. Collins wishing to get down the River again that day, there being nothing to induce him to stay here, having surveyed the whole the day before, when in search of Water. We returned to the Vessel at Twelve, and the hands were piped to heave up the Anchor; but before she could be got under way, she drifted aground on a Mud Bank, where she lay till the Tide rose again.

Wednesday the 11th got under way in the Morning, and, in the Evening came to Anchor in Shoal Bay,⁵⁰ near the Bank we were aground upon in our way up. On the 12th we got down as far as Egg Isle,⁵¹ and here we came to Anchor again.

In the Morning of the 13th we went on Shore to examine a Water-Fall,⁵² which one of the Seamen had seen the night before, when in search of Kangaroo. We found it excellent Water, and filled several Casks at it. While this was doing, I amused myself with carving my Name [A.H. 1804] in the solid Basaltic Rock (the Rocks named in the Chart⁵³ Basaltic, are composed of Quartz and Hornblend) with Hammer and Chissel, in a place where it must be seen by any Boat's Crew that may hereafter visit the Spot for Fresh Water.

On the 14th we got down to Middle Isle, and, on Sunday the 15th got under way, and at 9 came to an Anchor, in 25 fathoms Water, off middle Rock. On the Shore we saw a great number of the Natives, who called to us, apparently in a friendly way; but, on our approaching the Shore, they threw large Stones at us, and seemed determined to oppose our landing. After making Signs of Friendship in vain, we fired over their heads; on which they ran away into the Woods, and we saw them no more.

On the 16th I did not leave the Brig. I baited my Compass Net, and sunk it, but without Success. The 17th I employed myself in cleaning some Shells I had got from Middle Rock, Green Isle,⁵⁴ and Kent's Group, the Net overboard, but caught nothing. On the 18th, the Wind being South West, at five in the Morning unmoored Ship, and got down to Lagoon Beach. On the 19th, at 5 in the Morning, sailed out of Port Dalrymple, and, on the 21st, at five in the Afternoon, came to an Anchor in Port Philip, and found the Ocean ready for Sea.

[f135] *During my Stay at Dalrymple, I got several curious Minerals, which I have not yet had time to examine; in my next You shall have an account of them.*

Governor Collins had, in our absence, received Intelligence from Governor King respecting Port Dalrymple, which had determined him to sail for the River Derwent, as soon as he could ready for Sea.⁵⁵

Monday the 23d M^r. Brown and I dined with the Governor, and on Tuesday the 24th that Gentleman and myself went to Arthur's Seat,⁵⁶ at the foot of which we slept that Night, and on the following day, at 5 in the Afternoon, returned to the Camp, where we found the half of the Marines and Convicts were embarked, and that I was in public Orders to accompany the Governor.

On Thursday the 26th, at 5 in the Morning my Baggage went on board; and, at the same hour in the Afternoon, the Rev^d. M^r. Knopwood and myself accompanied the Governor on board his Cutter.

The Ocean not being large enough to carry the whole Colony at once, it was determined that Lieut Sladden should remain behind with the Command, together with Lieut Johnson; M^r. J. Anson,⁵⁷ First Assistant Surgeon; M^r. Fosbrook, Deputy Commissary; M^r. Hopley,⁵⁸ Third Assistant Surgeon, 20 Soldiers, and 100 Convicts: And the Rev^d. R. Knopwood, Assistant Chaplain; M^r. Bowden, First Assistant Surgeon; Second Lieut Lord; M^r. Harris, Deputy Surveyor General, A.W.H.H. Mineralogist, accompanied his Excellency, with 19 Marines, and 200 Convicts.

On Monday the 30th we got out of Port. Tuesday the 31st we experienced a foul Wind, with heavy warm Weather. The Lady Nelson, which was to have accompanied the Ocean, was out of Sight. Wednesday, the 1st of February, the like Wind and Weather, the Lady Nelson, not yet to be seen.

On the 2d a fine Breeze having sprung up in the Night, at nine in the Morning we were off Cape Liptrap, Light Wind and hot Weather. At dark we were still to the Westward of Wilson's Promontory.

With a fair Breeze, on the 3d, in the Morning, we ran past the Promontory and the Isles off it. At three, when nearly abreast of Hogan's Group, were taken aback by a

Gale from the Eastward, and driven into the Straits again. The next day brought a fair Wind, and we got through the Straits: We then had a fair Wind that carried us to Cape Pillar, off which place we carried away our Main Topsail Yard; shortly after which a Gale from the South West sprung up, and we could not weather the Cape, but were kept beating off and on for some days. On the 10th a fair Breeze took us into Storm Bay; and, at 9 at Night, we made Betsy's Isle: We then took in the most of our Sail, and stood off and on, under close-reefed Topsails all night. In the Morning it blew one of the strongest Gales I have witnessed, directly down the River, so, at twelve, we bore up for Frederick Henry Bay, and got in at four.

Governor Collins being anxious that the Commandant [f136], Cap^t. Bowen,⁵⁹ of the Royal Navy (who had been sent by Governor King, about 8 Months since, with an Establishment to form a Colony, at Risden Cove, in the River Derwent) should know of his Arrival, Lieut. Lord and myself offered our Services to go overland to the settlement. After pointing out the Dangers and Difficulties we had to encounter, finding we had a strong desire to go, he consented, and, at five that Afternoon, we left the Ship,⁶⁰ with two of the Convicts (trusty Men) and our two Body Servants. I had with me, as I was Pilot, a Map, drawn by Cap^t. Flinders, in which the Bay, and the Course of the Derwent were laid down. The distance, in a direct line, from the Ship to Risden Cove is about 25 Miles,⁶¹ but the Country is very Mountainous, and every now and then You meet with Salt-Water Inlets. We had some difficulty in getting on shore, as the Sea ran very high, and we were wet through before we got half-way.

On landing we divided the fresh Water and Provisions among the Men, and, each taking his load, we marched off, and, just before dark, got across the Neck of Land, which divides the River from Frederick Henry Bay; and walked round part of a large Bay, which opens into the River,⁶² called Ralph's Bay. At 9 at night, it being very dark, we stopped at a large Tree, and, after having made a Fire, and refreshed ourselves, laid down and slept till next Morning.

At four we started, and, after travelling over some very high Hills, we stopped to Breakfast. We had not yet fell in with any fresh Water, but depending on finding some a little farther on, we ate heartily of Salt Pork; drank our last Drop of Water, and walked on. At ten we began to be very thirsty, as the Sun was powerful. The places, in which there was fresh Water in the Rainy Season, were all dry. At twelve we had passed some steep high hills, and the Men were tempted to drink at a Salt-Water Inlet. I had never suffered so much for want of drink, and was almost unable to walk. Shortly after my Servant fell down, unable to go any farther. We were forced to leave one of the other Men with him, who was very ill from Thirst also, and walk on. We passed over one or two Hills, from which we could see Mount Direction, at the Foot of which is the Settlement.

The Mount was not far, but we were so much fatigued and faint, for want of Water, that we could not attempt to get up a very steep high hill between it and us: We therefore endeavoured to walk round the Bays and Heads. By the time we were half way round the Bay in which we were, we saw a Boat, sailing down the River; we immediately fired our Guns, and shortly after saw her coming towards us. She had in her Lieut. Moore,⁶³ then Commandant of the settlement, Cap^t. Bowen having returned to Sydney, in a Whaler from England, which put in there for Water; and from her he learned of the War. Lieut. Moore received us very kindly, and paid us every attention in his power; which the Governor told me he had requested the Commandant, in a Letter by Lieut. Lord, to do.

The Morning after our Arrival, we killed two large Kangaroos, with Mr. Mountgarret's Dogs. Mr. Mountgarret⁶⁴ is Surgeon to the Settlement.

[f137] On Wednesday, the 15th of February, the Ocean came to an Anchor in Risden

Cove, and the next Morning the Governor, attended by his Officers went on Shore: The Ocean fired twelve Guns as he landed. After examining the Land, Water, and the Situation of the Town, all of which displeased him, he returned on board the Ocean again.

The Town is situated on several Hills, and, on landing, You have to ascend a very steep Hill, before You arrive at it; and the people have to fetch their Water from a considerable distance, where they find it in holes the greatest part of the Year, though in the Rainy Season they have several considerable Runs. The Town, from its high Situation is much exposed to the South Winds, which, descending from a Mountain on the opposite Side of the River, called the Table (which in Winter is covered with Snow) are extremely cold.

The next Morning M^r. Harris was sent in search of a more advantageous place: He returned at Noon, with the information of a fine Run, sufficient to supply the largest Colony with fresh water. On the Banks of the Run are many hundred Acres of good Land, tending towards the Mountain I have before mentioned, on which the Rivulet has its Source. The Cove,⁶⁵ into which the Rivulet⁶⁶ discharges itself, M^r. Harris informed [us], was most advantageous for Shipping, as the largest Vessel might lie within a very few Yards of the Shore. In the middle of the Cove was a small Island,⁶⁷ on which a Store might be erected, safe from the depredations of the Prisoners; and, M^r. Harris was of opinion, it was in every other respect a desirable place for a Settlement, having the Advantage of being five Miles nearer the Harbour's Mouth than the Risden.

In the Afternoon the Governor went down to look at the Spot, and returned much pleased with it. His Excellency requested I would go down the next Morning, in one of his Cutters, and examine it, and, on my Return, give him my Opinion of it. I was much delighted with every thing I saw; the Water was beautifully clear and soft; the Land good, and level for a considerable way up; and, in some measure sheltered from the cold Southern Winds by high Hills in that direction. The Island I found a charming Object from the Shore, and is large enough for all the Public Stores, and one Sentinel would be sufficient to guard the whole, there being no connection with the Shore, except at low Water, when You may walk from the Island to the Main Land on a Sand Bank.

On Sunday, the 19th of February, the Ocean got down to the Cove, and the next day the Camp Equipage was sent on Shore, and pitched under the direction of Lieut. Lord. On the 22d M^r. Knopwood and myself accompanied the Governor on Shore, and took possession of our Marquees. On the 24th the People on Shore were employed in cutting down Trees to build a Bridge across the Stream. Sunday the 26th a Sermon was preached by the Rev^d. R. Knopwood, pointing out the advantages we were likely to enjoy, and the goodness of God, in at length establishing us in a Land of Plenty. On the 5th of March, Cap^t. Mertho, the Rev^d. R. Knopwood, M^r. Mountgarret, M^r. Brown, and myself, left the Settlement in two Boats, intending to go up the River as far as our Boats would carry us.⁶⁸ We got a short distance above Herdsman's Cove,⁶⁹ where we slept. The next day we were stopped by a rapid breaking over large Stones,⁷⁰ so as to prevent any Boats from proceeding farther. In our way we caught several black Swans, which are most excellent eating.

After refreshing ourselves with them, seeing nothing to induce one to stay here, and wishing to examine a Rock which [f138] had attracted my attention in the way up, I returned with M^r. Mountgarret, who was desirous of returning to his Sick. We soon arrived at the Rock, being carried rapidly by the Current, which, at all times, acts down the River, and is so strong in the Rainy Season as to prevent Boats from proceeding the shortest distance against it: Notwithstanding this, the Tide has a

regular rise and fall at the Sides, though it never sets up the River, or, at least, is never perceptible.

With great difficulty I ascended the Rock to a Hole I had observed to be full of a white Substance. I found it to be delicately-crystallised Alum, of which I collected a quantity, and returned to the Boat, but not without great danger and difficulty. This had detained us so long, that we could not get to Risdan that Night: We therefore landed, and made a Fire, round which we slept till next Morning, and got to M^r. Mountgarret's House⁷¹ to Breakfast.

On the 9th at five in the Morning, I again, in company with Mess^{rs}, Harris, Collins, and Mountgarret, and several Men to carry Luggage, left Risdan for the Coal River,⁷² at the back of Frederick Henry Bay. We arrived there at one in the Afternoon, after a most fatiguing walk of about 12 Miles. I procured many Specimens of Coal, which I found in great abundance, and tolerably good, but full of Cubic Pyrites, fossil Wood, &c. This Coal may, at some future Period be very beneficial to the Colony. The Stratum was not more than 6 feet in breadth, and its dip was considerable. We got part of the way back the same Night, and slept at a Hole of Water, after supping off a fine Duck, shot by M^r. Collins, and, early the next Morning, returned to Risdan.

After Dinner I left that Settlement, and on my arrival at Sullivan's Cove, saw the Pilgrim Schooner drop Anchor; and soon found she had Cap^t. Bowen on board, which Gentleman had left Sydney in the Integrity Sloop, and had been at Port Philip, soon after leaving which the Sloop's Rudder was lost in a Gale of Wind; but fortunately had fallen in with an American Whaler, with the Pilgrim as a Tender. Cap^t. Bowen had engaged with the Master of the Whaler to bring him here, for the purpose of giving up the Settlement at Risdan to Governor Collins, and then to return with him to Sidney: for which he was to receive £200. The Ship and Sloop were in Kent's Bay, Furneaux's Isles, which lie off the East Entrance of Bass's Straits.

On Monday the 12th of March M^r. Brown and myself left the Camp (attended by three Men) for the Table Mountain,⁷³ taking with us four days Provision; and, after crossing many Hills, arrived at the Foot (as nearly as we could guess, there being no evident Foot to it, as the Secondary Hills⁷⁴ lie on its sides) about 4 o'Clock in the Afternoon. On one of the Hills we crossed in our way, a piece of crystallised Jasper was put into my hand: However, we could not stop at that time.

At the Foot of the Mount, we found a small Hole of good Water, surrounded by Fern Trees of the most beautiful kind; many of them 14 or 15 feet high, with leaves, of 8 or 9 feet long, hanging gracefully from the Top on all sides. The Body, or Trunk of the Tree is covered with a silken brown Moss, and the whole together has a most enchanting appearance. In the same Valley were a great number of Sasafras Trees (different, however, from the Wood used in England,) which likewise have a fine appearance. On the Sides of the Mountain are some of the largest Trees in the World, called by our People at Sydney Blue Gum Trees: But the largest Tree I have seen is of that kind called Stringy Bark. On this Night we slept in the hollow of one, which hollow measured eleven feet in diameter; this is but a small tree; one near the Camp measures 44 feet round, breast [f139] high; and M^r. Brown, a Gentleman in whom the utmost confidence may be placed, informed me, he had seen a Tree lying on the Earth, large enough for a Coach and Six to be driven along it; and it measured upwards of 70 feet in circumference. The Trees in this Country are all straight, and not branched out till near the Top; so that a first rate Man of War might have Masts all of one piece: But to return to the Mountain.

After sleeping in the Tree all night, in the Morning, early, we began to ascend. About eleven, after a most fatiguing and dangerous Progress of 6 Hours, during the whole of which we were fighting with the Underwood, or pulling ourselves from one huge block

of Stone to another; cold, and faint, we arrived at the Top, and found ourselves in a heavy Shower of Snow. The Wind was piercing cold, and every thing had a wretched, comfortless, appearance: No Trees were to be seen here, and the few Shrubs, that we observed thinly scattered over the Spot, were stinted [sic] in growth, and almost bare of leaves. We remained on the Top three Hours, and then began to descend, and arrived at our Tree just before dark.

We slept here that night; and early the next Morning (the 14th) we again began to ascend the Mountain, of which I shall now give a more particular Account. Its height I could not ascertain as we could get no base, and had no Barometer. On leaving the Tree we began to ascend a Secondary Hill, leaning on the Table. It was for some way up composed of an Argillaceous Stone, having numerous impressions of Marine Shells, &c. on it; But I have never seen the smallest remains of Terrestrial Animals, or plants, in this Stone.⁷⁵ As I proceeded up, the Shells became more scarce, and I found numerous water-worn Pebbles imbedded in it.

We next came to a body of Sand Stone, some thin pieces of which I detached, and found to be flexible in a slight degree; they were unfortunately broken in our way down. This Sand Stone continued for a considerable way, but we could find no Animal Remains in it. On leaving this we arrived at the Primitive Stone, of which all the Mounts of that nature, I have yet seen in Van Diemen's Land, are composed: It consists of Quartz and Hornblend [Granitell]⁷⁶ of a dark olive-green colour; the Hornblend is the least considerable quantity of the Mass; and, where it has been exposed to the Weather, is of a Bronze colour. We found this Substance lying in immense Masses, of from three to fifty feet in length, and from two to ten feet in breadth; one on the other, as if they had been thrown thus, by some great power, towards the Top. They were on their Ends, one on the other, similar to the Basalts of Ireland,⁷⁷ and, at the Top, we found them piled regularly in joints; but at the juncture, the upper and under pieces had lost their solid Angles thus. [Here in the MS are sketched part of one such column of dolerite and a tetrahedral fragment (Humphrey's triangular 'Angles') spalled from the column where two adjacent columnar-joint surfaces and a transverse joint intersect.]

Many of the Angles I found lying not far from the Blocks from which they came, they were triangular, as I have figured them. Cape Pillar, and Cape Basalt, are composed of this kind of Stone; and I have not yet been able to detect [f140] any Granite in Van Diemen's Land; but it is probably to be met with on the North Coast of that Island, in Bass's Straits, as Wilson's Promontory, on the South Coast of New South Wales: the Promontory Isles lying off it; Curt's [Curtis] Isles; Hogan's Group; Kent's Group; and Furneaux's Isles, off the North Coast of Van Diemen's Land, are composed of that kind of Substance. These Isles, which lie in the Mouth of the Straits, at the East End, seem to point out, that, at some former Period, Van Diemen's Land was connected with, and formed part of New Holland. At the Western Entrance of the Straits, Cape Albany Otway,⁷⁸ King's Isle, the pyramid, Black Rock, Albatros Isle, Hunter's Isles, Three Hummock Isles, &c. point out a similar connection from one to the other: What the last mentioned places are composed of I know not, not having been near enough to them to determine; but should Cape Portland, and the Swan Isles off it, at the North East end of Van Diemen's Land be found to consist of Granite, it will go a great way towards confirming my Opinion, that Van Diemen's Land, and New South Wales, were formerly one Isle, or Continent; and the Land that once filled the place where the Strait now is, has been torn away by the Swell of the Western Ocean, which Ocean is daily gaining on the West Coast of New Holland, and from time immemorial has fallen on it.

During my short Stay at Port Philip, I had repeated opportunities of observing the

Encroachments of the Sea, on the narrow Neck of Land which divides that Port from the Western Ocean: Not only the soft and soluble parts were taken away, but, likewise, the solid Sand Stone, and Limestone, in a most remarkable manner; for, whenever a small Stone had by any accident fallen into a Hole, out of which it could not be easily washed, and yet had room sufficient to move in, I found, after it had been in this situation for any length of time, both hole and Stone perfectly round, which was occasioned by the motion the Stone received from the falling Surge. On the Sea Shore were thousands of holes, formed in this manner, and they are daily increasing in number and size: Some were as large as an ordinary sized Room. An unfortunate Prisoner was drowned in one of these Holes, from imprudently going too near it, when the surge was coming in: He was nearly dashed to pieces in the Bason, and quite dead, before any Assistance could be rendered him. This happened since I left Port Philip.

But I find myself a long way from the Mountain again. Its Summit is an extensive plain, on which no less than five Rivers have their Sources. From the South Side of the Mount we could see a large River, which we supposed to be the Huon: It appeared to be about 12 Miles from the Table; but, as my time is short, I cannot enter into details in this Letter. We got down to our Tree that Night, and, next day returned to the Camp.

Shortly after Mr. Brown and I attempted to reach the Source of the Derwent; at which time we were twelve Days⁷⁹ in the Woods, and were driven back by want of Food. After following its Course upwards of 80 Miles, we left it among high Mountains, not more than 10 Yards in breadth, but one foot deep. On this Journey I collected many good Minerals, most of which were thrown away by the People I had with me, to lighten their Loads.

Our next Journey was to the River Huon, over the Table Mountain. After great difficulty we reached the River, and traced it much higher than any who had been before us. It is a charming Stream, with much good Ground on its Banks, and Timber of an immense [f141] size. The lowest part of it, we were at, was about a quarter of a Mile in breadth, and had three Islands⁸⁰ of considerable size in the middle. The Water was here perfectly fresh.

It being impossible to return by the way we came, up the South Side of the Mountain, we were forced to steer for Storm Bay Passage, which, after suffering much from want of Water and Rest, we succeeded in reaching, and returned to Camp after an absence of sixteen days, almost worn out.

In the beginning of our Journey we were five days and nights without Sleep, owing to heavy Rains, and not being able to find among the Rocks we were travelling over, any single one large enough to make a bed of.

I found but few Minerals, as You will see by the inclosed List. The principal of my Discoveries is the Green Garnet in its Matrix, and on the Surface of Pitch Stone, and included in it.

Cap'. Rands⁸¹ of the Alexander Whaler arrived here two days since (2d August 1804): He left his Ship in Adventure Bay. He has been at Sydney, and says, that a Packet from England had arrived there, with Orders to the Governor to form a Settlement at Port Dalrymple; and that Colonel Paterson⁸² is gone, with 50 of the New South Wales Corps, and a number of Prisoners to the Port; and that Norfolk Island is given up. I do not think Port Dalrymple will answer for a Settlement: It is much inferior to this Place.

I must inform You that Lieut. Lord and I have built a small House; the first of Hobart Town;⁸³ we have received, however, much assistance from the Governor, who has kindly given us Nails, Locks, Glass, Paint, a Fire Stove; pitch and Tar for the Top,

and Men to help; with an Acre of Ground, which is much to have in the Town. Our Cottage consists of four Rooms, in one of which I have my Apparatus; one I have lent to Mr. Sladden, and his Lady, who lately arrived from Port Philip, after a very long Passage; the third Lieut. Lord sleeps in, and the other is a Sitting Room. It has, however, cost us about £50, notwithstanding the help we have had. We have been offered more Money for it, and, in one Year's time it will be worth five times that Sum. We have likewise purchased five Dogs, which will kill about 1000lb weight of Kangaroo a Week; for these Dogs we have given £25; but I must tell You, the Governor has contracted to give us 6^d per Pound for as much as we can give him. We have only two of our Dogs at present, but, after the Ocean sails, we shall have the others. Those we have supply us with fresh Meat every day; and we have exchanged 400lb with Cap'. Mertho for Flour. The Skins are worth 4 Shillings each in this Country, to make Ladies Shoes. You see, therefore, I shall make Money; but to do it I fear I must distress You.

5 August 1804. 8 in the Even^g.

I was up very late last Night, and packed up all my Minerals, &c, as the Ocean sails Tomorrow; and had pursued Writing all this day; but had not been long in Bed, before I was taken very ill, and it was not till a short time ago that I could sit up in Bed. I believe I have caught Cold, as the Marquee is damp, there having been lately much Rain. I am at this time better, and by Morning, I have no doubt, I shall be well. News is this moment brought me of the arrival of the Lady Barlow, which came from India, with Cattle for Governor King, who has sent them here, viz. 239 Cows, several Bulls, 6 Oxen, 4 Mares, a Stallion, & 3 Horses. — Governor King has likewise sent One Year's Provision and One Year's Cloathing for the People.

I have just learned from Lieut. Sladden, who had been with the Governor, that there is a Box on board the [f142] Lady Barlow for me: This is distressing, as I am afraid I cannot have it (though in the River) before the Ocean sails.

6 August. 11 in the Morning

Learning last Night from Cap'. Mertho, that he should not sail before Tuesday Morning, I left off Writing. This Morning, I am much better, but by no means well. There is little hopes of getting my Box before the Ocean Sails, as the Wind is foul for Ships to come up the River.

Have you received a small Box of Land Shells from Teneriffe; and one from Rio de Janeiro. By my Friend Mr. Bromley, Surgeon of the Calcutta I sent you a Box of Shells and Minerals; but the two Boxes I now send You of Port Philip Shells, and Minerals from this Country, will, I flatter myself give you great pleasure. My Minerals will, I trust, be found valuable, as they are good Specimens, and many of them new. I pride myself more on them than the Shells, though the latter will be most productive to You. But what distresses me, is, that I am under the necessity of drawing on You for a large Sum, knowing, as I do, what must be Your Situation, in consequence of the War. I would not have done it, but from the great Gains I shall hereafter receive from this first Expense. The Dogs will pay themselves in one Month more than double, as they will kill at least 500lb of Kangaroo per Week, and the Governor, as I said before, has contracted with us for it at Sixpence per Pound. We have, besides, 20 Fowls; a Goat

and Kid; Sow and pigs, and a Goose; together with a House, and an Acre of Land, which, from their Situation in the Town, will always be a property. I have drawn on You two Bills, one to Cap^t. John Mertho, for £12.6.6, the other to Jacob Mountgarret Esq^r. for £43.12.6, both payable at 30 Days Sight. The Things I have sent will partly reimburse You, and inclosed is the Governor's Certificate [A Copy of this see page 143. — G.H.], by which You will recieve my Pay, and a List of the Government Collection.⁸⁴ Those Minerals I have sent You are referred by numbers to this List. I hope You will be able to pay the Bills when presented: as, should they be returned, I shall lose my Credit, and the Esteem of the Officers, as no one is more contemptible in their eyes, than he who would give a bad Bill, as they term it.

I have received great kindness from the Governor, who has repeatedly told me that I should have any thing the Store afforded, if I would only mention what it was. His Excellency has never refused me any thing I asked of him, which, in this respect makes me comfortable. When I was ill, yesterday even, I received a very kind Note from him, which concludes "I shall, at all times, be happy, not only to aid Your Public Researches, but also to contribute to Your personal Comfort".

M^r. Accum has not sent a Chimney of the length as ordered (12 feet), and I have not more than three feet; and have been under the necessity of applying to the Governor for Tin to complete it, which his Excellency has given me, though it impoverished the Store, as there is but little.⁸⁵ M^r. Accum has sent no variety of Glasses; the Retorts are all of one kind, and not one of them tubulated. The Crucibles are all of the common sort, not one long, or with a Cover. No evaporating Dishes, and, in short, the worst chosen Assortment I ever saw. Pray desire him to give You a Copy of the Bill of the Apparatus, with the Prices he sent to M^r. Sullivan.⁸⁶

[f143] I have received my Books, in good Condition, from the Governor; and only wish I could afford to continue Nicholson's Journal.⁸⁷ I am greatly in want of Geological Books, such as a Translation of Werner's Works,⁸⁸ or any other good Work of that kind. I wish to have a good Treatise on Pottery, and the Art of Glass-Making; I mean the mechanical part. I have also received from the Governor a small Pocket Compass, but am much in want of a good Telescope.

No one can have any Idea of the Infamy of the People of the Colony (the Prisoners I mean) who has not witnessed it: Nothing but Flogging and Stealing, though I have not lost any thing of consequence, from having the best Servant in the Place. His Name is Robert Kennedy. He has been a Servant of Sir G.P. Turner, and Sir John Dryden; and came to this Country for buying a Watch, knowing it to be Stolen. He says he had it of a Man, whom he could not afterwards find. Most of the Officers have suffered by their Servants, but myself. My other Servant, Joshua Thatcher, is a good hard-working Man: The Governor gave him to me as a particular Favour. Thatcher was strongly recommended to him. I expect, however, to have the number of my Servants increased, as soon as I have my Farm of 100 Acres; and I look for it shortly.

The Weather is in Winter very Cold; the Table Mountain is at this time covered with Snow; and I have suffered greatly from Cold and Rain, which latter falls very heavy in the Wet Season; and a Marquee is but a poor protection from it. I have frequently slept with the Water a considerable depth (6 inches) under my Bed; but this is nothing to being out all night in the Rain, after a fatiguing Day's March: Your Fire will not burn, and if it would you could not approach it for the Steam of Your Cloaths. I have been out five succeeding rainy Nights, two out of the five as we were travelling over small Rocks; I believe two more would have killed us, as we could get no Rest, after travelling hard all day. I find that since I have been in Van Diemen's Land, I have slept, or been upwards of forty Nights in the Woods. You may judge I have not been idle.

Two Russian Ships,⁸⁹ on discovery, are expected here daily, and the Governor has received Orders to assist them to the utmost of his power.

I am in want of Wedgwood's Pyrometer,⁹⁰ and a pair of pocket Pistols and Shot.

8th August 1804.

I have received from the Governor Your Letters of the 4th and 9th October, and 16th November 1803. The Experiment did not arrive at Port Jackson with the Coromandel, by which Your Letters and Box came, and had not arrived when the Lady Barlow left that Place. No one can judge my joy, when the Governor's Servant put the Letters into my hands, and I saw Your Hand-writing in the Address. I congratulate Miss During and my Brother George⁹¹ on their Escape; but tell them I am accustomed to Gales of Wind, and have been two or three times in danger of Shipwreck, particularly in the Francis Schooner. When that Vessel arrived at Port Jackson, she was put into Dock, when, on stripping off the Copper Sheathing, they found Holes large enough for men to get through. She is mentioned in Governor Collins's Work⁹² as condemned, at the time he was before in New South Wales.

It is my Intention, should health permit, to attempt crossing Van Diemen's Land, from this place to Port Dalrymple; especially when there is a Settlement at that Place. The distance is nearly 200 Miles. I have spoken to Governor Collins respecting it; when he said, he greatly wished it, but [f144] expressed his fears for my safety; and said he could be glad if another Party should start from Port Dalrymple at the time; but as it [is] very uncertain whether we should meet, I do not think that will detain me.

I have just time to add that I have received my Box, that I have written to Governor Paterson, and have given the Parcell and Letter for him, which came in the Box, and also my Letter to M^r. Brown, who goes to Sydney in the Ocean, which sails at day-light. My Illness was similar to that my Aunt Forster⁹³ had, at the time I left England, dreadfully sick all day and night and nothing would remain on my Stomach; but I am to day quite recovered.

Received per the Ocean, Cap^t. Mertho, 11th Sept. 1805 [G.H.]

Hobart Town, River Derwent
Van Diemen's Land
19th August 1804

As the Lady Barlow will leave the River in a few days,⁹⁴ and as Cap^t. Mertho intended staying at Sydney a Month or Six Weeks to refit, I seize the opportunity of again writing to You, thinking it probable this Letter may find him there.

From Cap^t. McAsgill, of the Lady Barlow, Lieut. Lord and myself, as one Concern, have together purchased One Cow and Calf at £45, and eight Sheep, at £5 per head, making in all £85 Stock, in which purchase we have been kindly assisted by the Governor. This Acquisition, if we are fortunate, will produce a Stock worth four times that Sum in two Years. M^r. Mountgarret asked £70 for a Cow and Calf, by no means so good as ours, and the Governor purchased them of him. We have also bought a large quantity of Corn; India, and other sorts: And the Governor has purchased 120 Gallons of Rum, at 12 s/ per Gallon, which he has kindly offered to the Civil and

Military Officers; so we can have any quantity of this, repaying the Store in a given time. The established price at which it is to be paid away for Labour, is One Guinea per Gallon, but we can make four times that of it. We shall take some, but will be careful how we get in Debt: It is better to make Trial with a small Stock first.

The following is a List of Stock, belonging to Lieut. Lord, and myself, One Cow, and Female Calf; Eight Ewe Sheep; one Goat and Female Kid; two Sows and two Sow pigs; 15 Fowls, and one Goose. Five Dogs, worth in this Country £50; These Dogs supply our Table with Kangaroo every day, which is most excellent eating, not unlike good Beef, but without fat. We shall shortly supply the Governor with a large quantity weekly, to issue to the Prisoners.

Every thing in the Colony has the most favourable Appearance. Two Ships, the Lady Barlow, and the Alexander whaler, are laying off the Settlement. Houses are increasing in number very fast: Ours, which the Governor has named the House in the Wood, from its distance from Town, is now surrounded by the Frames of Houses. Horses are trotting about, and Sheep and Cows are every where to be seen: In Short, the Settlement is in a very flourishing State, and more independent than Sydney was after four or five Years.

Lieut. Lord is first Cousin to Sir Hugh Owen, of Wales, and has a Brother, a Counsellor, in Lincoln's Inn. [f145] It was necessary for me to join some one, who would look after the Stock in my Absence in the Country, and Lieut. Lord is prudent and steady.

The Lady Barlow will probably go to England from Port Jackson, if she should, you will most likely receive the Boxes from her.

Copy of the Governor's Certificate mentioned page 141. [G.H.]

These are to Certify that Mr. A.W.H. Humphrey, Mineralogist of the Colony at this Place, has been since the Date of his Commission, and is at present in the Execution of his Office.

*Given under my Hand, Hobart Town,
River Derwent, this 4th August 1804.*

*David Collins
L'. Governor*

NOTES

Abbreviations used: *ADB* — *Australian Dictionary of Biography* (Melbourne); *DNB* — *Dictionary of National Biography* (Oxford); *DSB* — *Dictionary of Scientific Biography* (New York: Scribner); *HRA* — *Historical Records of Australia* (Sydney); *Hist. Rec. N.S.W.* — *Historical Records of New South Wales* (Sydney).

1 *Hist. Rec. N.S.W.* (V: xxvii) gives 29 April 1803.

2 *Calcutta* and *Ocean* both anchored Santa Cruz roads, Teneriffe, 16 May 1803 (*Hist. Rec. N.S.W.* V: 171).

3 *Calcutta* reached Rio 29 June 1803. The trouble among settlers on the *Ocean* (Pateshall, 1980: 50) is not mentioned by Humphrey.

- 4 São Sebastião do Rio de Janeiro, the full name of the city. See also the accounts by Knopwood (Nicholls, 1977: 10-12), Pateshall (1980: 45-50) and Harris (British Library, Add. MS 45156 ff1-5, 43-54).
- 5 John Timothy Swainson, amateur naturalist and collector. For many years secretary to the Board of Customs in London and later collector of customs, Liverpool. Died at Elm Grove, near Liverpool, 23 September 1824, aged 67. His son, William — (DNB) — is mentioned in the text p. 109.
- 6 John Cary [1754?-1835], engraver and mapseller in London. Associated with his brother William [1759-1825] — (DNB) — in the manufacture of globes (Close, 1926: 36).
- 7 This da Costa has not been identified. The absence of comment suggests he was not related to E.M. da Costa, sometime friend and collaborator of Humphrey's father. That E.M. da Costa's family, however, had links with Brazil is shown by the note (*Gentleman's Mag.*, 1812, 82 (1): 143) on Hippolyto da Costa [1774-1823], then editor of the *Correia Braziliense* in London.
- 8 William Nicholson [1753-1815] — (DNB). His *Introduction to Natural Philosophy* was first published London 1782; later editions 1787, 1790, 1796 and 1805.
- 9 A goniometer. Arnould Carangeot [1742-1806] — (DSB) — devised and demonstrated the first such instrument (a contact goniometer) at Paris 1782. The reflecting goniometer of William Hyde Wollaston [1766-1828] — (DNB) — was a later development (1809). Carangeot's invention arose from a project in which Jean-Baptiste Louis Romé de l'Isle [1736-1790] — (DSB) — commissioned the engraver François-Louis Swebach Desfontaines [fl. 1765-1792] to produce terra cotta models of crystal forms. Sets of 438 such models, to match illustrations in Romé de l'Isle's *Cristallographie* (1783), were on sale in Paris by late 1782.
- 10 Fredrick [Friedrich] Christian Accum [1769-1838] — (DNB).
- 11 Edward Foord Bromley [1777-1836]. The statement in *ADB* (I: 155) that Bromley first came to Australia in 1816 is plainly incorrect.
- 12 In fact 7 October 1803 (*Hist. Rec. N.S.W.* V: 247); *Calcutta* arrived 9 October (*Hist. Rec. N.S.W.* V: 232).
- 13 On 31 July 1803, according to Knopwood (Nicholls, 1977: 15).
- 14 Daniel Woodriff [1756-1842] — (ADB).
- 15 Sullivan Bay (38° 21' S; 144° 46' E), near The Sisters, just east of the present Sorrento. For contemporary charts see those of Harris (British Library, Add. MS 45156 ff12) and Tuckey (photographic copies in State Library of Victoria, from the original in the British Library).
- 16 John Mertho, master of the *Ocean*, chartered from Messrs Hurrys of Newcastle-upon-Tyne.
- 17 David Collins [1756-1810] — (ADB).
- 18 The place is marked at British Library, Add. MS 45156 ff12-13.
- 19 Robert Knopwood [1763-1838] — (ADB).
- 20 Jacques-Louis, comte de Bournon [1751-1825] — (DSB).
- 21 George Prideaux Robert Harris [1775-1810] — (ADB). Humphrey, in fact, did not join the excursion.
- 22 Cf. Vallance, 1975: 18.
- 23 Santa Cruz, at the eastern entrance to the bay of Rio de Janeiro.
- 24 To Port Phillip, between Point Lonsdale and Point Nepean. The tidal race there is known as the Rip.
- 25 William Collins [1760?-1819] — (ADB).
- 26 Leonard Fosbrook [fl. 1803-1814] — (ADB).
- 27 William Sladden [fl. 1793-1814] — (HRA (III) I: 796).
- 28 Edward Lord [1781-1859] — (ADB).
- 29 James Kingston Tuckey [1776-1816]. See Tuckey, 1818: xlvi-lx.
- 30 HRA (III) I: 30.
- 31 Matthew Bowden [1779?-1814] — (ADB).
- 32 James Michael Johnson. He left the colony, October 1807 (HRA (III) I: 393).
- 33 James McCulloch. Returned to England on *Calcutta* 1804.
- 34 Edward White. Attached to *Calcutta*.
- 35 Harris in a letter 11 November 1803 (British Library, Add. MS 45156 ff9-10) remarked: 'At Breakfast the mess is divided to suit convenience — I breakfast . . . [with] my Friends, Humphry the Mineralogist & Lts. Lord & Johnston of the Marines — We also drink tea & sup together when we can shoot a few small birds to eat.'

- 36 Robert Kennedy (or Cannady). See *HRA* (III) I: 796.
- 37 Sir Alexander Crichton [1763-1856] — (*ADB*).
- 38 Deal Island (39° 29' S; 147° 21' E).
- 39 See also Brown's remarks (Vallance and Moore, 1981).
- 40 Robert Brown [1773-1858] — (*ADB*).
- 41 James Symons. See *HRA* (I) V: 808.
- 42 Thomas Clark(e) [1756?-1828] — (*ADB*).
- 43 On the eastern shore of Port Dalrymple, somewhere between Low Head and the present Georgetown.
- 44 Now, York Cove, at Georgetown.
- 45 On a voyage to Sydney, H.M.S. *Guardian* struck an iceberg in the Southern Ocean, 23 December 1789. By a remarkable effort the vessel was brought to Table Bay, Cape of Good Hope, where it was beached and finally abandoned (*New London Mag.*, 1790, 6 (5): 222-4; *Hist. Rec. N.S.W.* 1 (2): 310-11). The article on Clark(e) in *ADB* makes no mention of the disaster.
- 46 Probably the hill now called The Buffalo; Clark(e) places the hill north of Outer (York) Cove.
- 47 The distance (12 miles) appears to be exaggerated; the high point reached may have been part of the Asbestos Range or perhaps Flowers Hill.
- 48 In 1798 Flinders and Bass explored the River Tamar as far as the bend just below Cimitiere Point.
- 49 Cataract Gorge, Launceston.
- 50 Appears to be in the vicinity of the present Nelsons Shoal.
- 51 Egg Island, near Hillwood.
- 52 At the mouth of the Supply River, on the western shore of Supply Bay, Port Dalrymple.
- 53 The chart has not been found; according to Stancombe (1966) the inscription is still visible on what he calls dolorite (= dolerite).
- 54 Opposite York Cove, Port Dalrymple. The island is now linked to the shore.
- 55 *HRA* (III) I: 53.
- 56 A hill of granite near the southeastern shore of Port Phillip; named in 1802 by John Murray.
- 57 William I'Anson [1779-1811] — (*HRA* (III) I: 782).
- 58 William Hopley [fl.1795-1815] — (*ADB*).
- 59 John Bowen [1780-1827] — (*ADB*).
- 60 Probably off the present Lauderdale (about 42° 55' S; 147° 29'E).
- 61 Humphrey exaggerates; the distance was about 13 miles. Others at the time knew better. Harris, troubled by ophthalmia and unable to travel, estimated 'abt. 12 or 14 miles' over difficult country (British Library, Add. MS 45156 ff14-15), Knopwood (Nicholls, 1977: 42) thought 14 or 15 miles and Collins (*HRA* (III) I: 222) not more than 15 miles.
- 62 The Derwent.
- 63 William Moore [fl.1796-1810] — (*HRA* (III) I: 794-5).
- 64 Jacob Mountgarrett [1773?-1828] — (*ADB*).
- 65 Sullivan Cove. See note 86.
- 66 Hobart Rivulet.
- 67 Hunter's Island; it has since lost its identity.
- 68 See also Nicholls, 1977: 45-6.
- 69 At the confluence of the Derwent and Jordan rivers.
- 70 About the present New Norfolk.
- 71 At Risdon; for the position of Mountgarrett's house see map facing p. 48 in Walker (1914).
- 72 The Coal River enters Pitt Water below Richmond; the principal occurrences of coal lie upstream of Richmond but none has proved to be of great value.
- 73 Now Mount Wellington (1270 m), 8 km WSW of Hobart.
- 74 Secondary here may mean subsidiary but as Humphrey elsewhere refers to the dolerite (his *Granitell*) as Primitive it is arguable he intended a geological sense, that is, to imply the hills consisted of what would now be termed broadly late Palaeozoic to Mesozoic rocks. Brown also called these hills Secondary (Vallance and Moore, 1981).
- 75 Humphrey's (and Brown's) geological observations here are discussed by Vallance and Moore (1981).
- 76 Granitell (granitelle, granitello), a vaguely-defined petrographic term now obsolete but about 1800

- used for binary granular rocks, one of the two mineral phases of which is quartz. Humphrey shows awareness of terminology but what he called quartz is plagioclase; his 'Hornblend' is pyroxene.
- 77 For instance at The Giant's Causeway in Co. Antrim.
- 78 The original name of what is now Cape Otway, on the coast of Victoria. The localities next listed by Humphrey all lie off the NW corner of Tasmania.
- 78 Humphrey exaggerates. Knopwood (Nicholls, 1977: 48) noted departure of the party at 9 a.m. 27 March 1804 and its return in the early afternoon of the 9th day, 5 April.
- 80 Egg Islands, downstream from the present Huonville.
- 81 Robert Rhodes; he left Sydney 4 July 1804 (*HRA* (I) V: 122).
- 82 William Paterson [1755-1810] — (*ADB*).
- 83 *ADB* (I: 127) assigns credit for building the house to Lord alone.
- 84 This obviously-important document has not been found, nor has the original provided for the government.
- 85 Collins (*Hist. Rec. N.S.W.* V: 342-3) also complained about the quality and incompleteness of stores.
- 86 Presumably John Sullivan [1749-1828], under secretary for war and the colonies 1801-5 (*HRA* (I) III: 785). Sullivan Bay at Port Phillip and Sullivan Cove, Hobart, were named in his honour.
- 87 *Journal of Natural Philosophy, Chemistry and the Arts* . . . , a notable scientific serial, published London 1797-1815. See also note 8.
- 88 Abraham Gottlob Werner [1749-1817] — (*DSB*). Although his ideas were already widely-known in Britain, none of Werner's books had been published in English translation when Humphrey made the request.
- 89 The expected visit (*HRA* (I) IV: 306) of the ships *Neva* and *Nadezhda* did not, in fact, take place.
- 90 Josiah Wedgwood [1730-1795] — (*DNB*). His pyrometers depended on the property of clay to shrink as it is heated.
- 91 George (III) Humphrey [1789?-1831]; Miss During has not been identified.
- 92 D. Collins: *An Account of the English Colony in New South Wales*, . . . , vol. II (1802), p. 330, refers to the *Francis* in 1801 as 'nearly worn out'.
- 93 Elizabeth Forster [1735?-1816].
- 94 The *Lady Barlow* (Capt. M'Askill) sailed 22 August 1804 and reached Sydney on 2 September (*Sydney Gazette*, 9 September 1804) where, on 16 October, she sank at her moorings. The vessel was raised and sailed for England 21 January 1805 only to be seized by the East India Company on her arrival in the Thames (*HRA* (I) V: 661, 705, 711). Mail must have been transferred in Sydney to the *Ocean* which sailed 3 October 1804 for England by way of China.